

## **9.0 TEN YEAR IMPLEMENTATION PLAN**

This section presents the various transit improvement projects that are proposed for the MDT transit system over the planning horizon of the FY 2010- 2019 TDP Major Update. The committed transit improvement initiatives are provided for capital, service, and infrastructure. This is then followed by the 2019 Recommended Service Plan which provides the proposed transit system improvements, modification and new services as well as additional capital needs projects that are partially funded or unfunded altogether.

These projects are developed based upon identified need as determined by MDT planning service staff recommendations.

### **9.1 Capital Improvement Plan -- Committed Transit Improvement Initiatives**

On an annual basis MDT prepares a proposed capital budget (FY 2009 – 2010) and multi-year Capital Plan that outlays specific projects related to the expansion and improvement of MDT existing services (Table 9-1). Please note that the YOE totals in Table 9-1 are based upon the total project cost which include annual dollar amounts previously expended prior to FY 2009 - 2010. Furthermore, the escalation applied is specific to each project as related to project conditions and contractual agreements. Each selected project corresponds to a committed funding source and is consistent with the Miami-Dade MPO's FY 2010 – 2014 Transportation Improvement Program (TIP). A brief overview of the committed projects that are funded from PTP funds is also included.

The following funded projects are expected to be implemented within the next ten years for the Metrorail and Metrobus system. There are no planned service extensions or expansion of the existing Metromover system under consideration at this time or within the planning horizon of this TDP Major Update.

### **9.2 Proposed Corridor Projects and Related Projects (Committed)**

#### **9.2.1 Orange Line Phase 1 MIC-Earlington Heights Connector**

The 2.4-mile Miami Intermodal Center (MIC)/Earlington Heights proposed extension is set to extend from the MIC to the existing Earlington Heights Metrorail Station. Included in the project is a new Metrorail Station located at the MIC to serve as a multimodal transfer hub for Metrobus, Metrorail, Tri-Rail, future expansion of Amtrak, and other chartered services such as intercity bus line. This project also proposes to bring together rental car agencies at the MIC under one roof. Connection to Miami International Airport (MIA) will be made possible from the MIC with the MIC-MIA Connector-People Mover Project. This project will allow access to the airport using Metrorail.

This project is currently under construction and is anticipated to open for service in May 2012. The total estimated project cost is \$526.5 million.

### **9.2.2 Orange Line Phase 2 and Phase 3 (North Corridor and East-West Corridor)**

Miami-Dade Transit intends to pursue incremental and affordable transit improvements along the North and East/West Corridors until heavy rail funding options are identified.

### **9.2.3 Metrorail Station Graphics and Signage Upgrade**

Throughout the Metrorail system all signage at each Metrorail station will be replaced and upgraded to include a modern support post and improved signage. Project completion will occur by the first quarter of 2012 with a total project cost of \$7.6 million.

**Table 9-1: MDT FY 2009 – 2010 Proposed Capital Budget and Multi-Year Capital Plan**

Project Name	FY 09-10	FY 10-11	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 15-16	FY 16-17	FY 17-18	FY18-19	FY 19-20	YOE Total
<b>PROPOSED CORRIDOR PROJECTS &amp; RELATED PROJECTS:</b>												
Orange Line Phase 1, MIC-EHT Connector Project	\$121,092,750	\$136,526,912	\$87,654,434	\$17,137,205								\$526,529,000
Orange Line Phase 1: MIC-EHT Connector (FDOT MIC Components - West Concourse, Vestibule, & Bus Plaza Rwy)	\$6,600,000	\$6,285,000	\$6,185,000	\$150,000								\$19,306,368
Orange Line Phase 1: MIC-EHT Connector (FDOT MIC Component-Bus Plaza)	\$2,495,000	\$2,075,000	\$2,075,000	\$80,000								\$6,768,324
Orange Line Phase 2, North Corridor Metrorail Extension	\$20,000,000											\$83,382,007
Metrorail Central Control Upgrade	\$13,931,400	\$12,719,322	\$2,792,369									\$32,399,091
Existing Metrorail Station (Phase 1) - Graphics & Signage Upgrade	\$3,910,570	\$3,076,391	\$222,713									\$7,623,474
<b>Subtotal</b>	<b>\$ 168,029,720</b>	<b>\$ 160,682,625</b>	<b>\$ 98,929,516</b>	<b>\$ 17,367,205</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 696,195,264</b>
<b>VEHICLE PROCUREMENT &amp; RELATED PROJECTS:</b>												
Lehman Yard Rehabilitation & Expansion Phase 1 (5 storage and 2 MOW tracks)	\$ 1,605,093	\$ 4,086,525	\$ 1,380,610									\$ 7,072,228
Rail New Vehicle Procurement (136 cars)	\$ 37,260,539	\$ 22,759,557	\$ 64,530,341	\$ 45,709,162	\$ 90,166,642	\$ 93,003,142	\$ 20,189,463	\$ 462,200	\$ 477,453			\$ 401,457,541
Lehman Center Test Track	\$ 7,308,000	\$ 7,790,475	\$ 2,133,931									\$ 18,067,781
Palmetto Station Traction Power Sub-Station	\$ 13,020,000	\$ 2,523,675										\$ 16,344,925
Mover Original 12 Phase 1 Vehicle Replacement	\$ 50,000											\$ 32,920,914
Mover 17 Phase 2 Vehicle Replacement	\$ 11,072,185	\$ 15,593,788	\$ 679,768									\$ 42,445,813
Secure Funding for Bus Procurement to Support I95 Manage Lanes	\$ 13,845,000											\$ 13,845,000
<b>Subtotal</b>	<b>\$ 84,160,817</b>	<b>\$ 52,754,020</b>	<b>\$ 68,724,650</b>	<b>\$ 45,709,162</b>	<b>\$ 90,166,642</b>	<b>\$ 93,003,142</b>	<b>\$ 20,189,463</b>	<b>\$ 462,200</b>	<b>\$ 477,453</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 532,154,202</b>
<b>FARE COLLECTION</b>												
<b>Subtotal</b>	<b>\$ 22,875,244</b>	<b>\$ -</b>	<b>\$ 839,995</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 80,000,000</b>

**Table 9-1: MDT FY 2009 – 2010 Proposed Capital Budget and Multi-Year Capital Plan (continued)**

Project Name	FY 09-10	FY 10-11	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 15-16	FY 16-17	FY 17-18	FY18-19	FY 19-20	YOE Total
<b>OTHER PROJECTS:</b>												
Track & Guideway Rehabilitation Subset	\$ 6,414,333	\$ 7,412,531	\$ 6,868,333	\$ 5,917,333	\$ 3,899,333	\$ 1,159,000						\$ 46,786,000
Existing Metrorail Stations Repair to Stair Railings (Part 1)	\$ 49,077											\$ 402,337
Dadeland South Parking Lot Expansion	\$ 109,196											\$ 991,654
Park and Ride Facility at NW 186 St. & NW 73 Ave	\$ 1,201,516											\$ 1,900,000
Park and Ride Facility at SW 344 Street and Busway	\$ 3,025,821	\$ 198,058	\$ 3,152,770									\$ 9,744,707
Park and Ride Facility at Kendall Drive and SW 127 Avenue	\$ 1,989,680	\$ 474,857										\$ 4,150,377
Douglas Road Metrorail Station Parking Lot Facility Under Guideway	\$ 68,775											\$ 259,201
Coral Way Maintenance Facility - Employee Access to Parking												\$ 256,322
Dadeland South Metrorail Station Comfort Station	\$ 370,156											\$ 400,427
NW 7th Avenue Transit Village	\$ 2,241,000	\$ 951,000										\$ 10,036,000
Electronic Signage Information System (ESIS)												\$ 1,000,000
AMAG \ Proximity Access Control	\$ 11,025	\$ 11,521	\$ 11,982	\$ 16,827								\$ 159,339
Install Digital Recording System at Metrorail Tail - Track Video												\$ -
Metromover Tools & Equipment	\$ 53,550	\$ 55,947	\$ 58,191	\$ 60,231	\$ 19,081							\$ 298,000
Metromover Phase II Vehicle Facelift HVAC System Replacement												\$ -
Metrorail HVAC System Replacement	\$ 536,908											\$ 3,650,974
Metromover Phase II Vehicle Facelift Door System Overhaul												\$ 986,724
Northeast Passenger Activity Center	\$ 1,316,000	\$ 1,454,000	\$ 1,786,000	\$ 1,786,000	\$ 1,786,000							\$ 8,499,000
<b>Transit Operating System Replacement Project</b>	\$ 4,651,280	\$ 1,152,124										\$ 5,803,404
<b>Sub Total</b>	<b>\$ 22,038,317</b>	<b>\$ 11,710,038</b>	<b>\$ 11,877,276</b>	<b>\$ 7,780,391</b>	<b>\$ 5,704,414</b>	<b>\$ 1,159,000</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 96,624,466</b>
<b>Total</b>	<b>\$ 297,104,098</b>	<b>\$ 225,146,683</b>	<b>\$ 180,371,437</b>	<b>\$ 70,856,758</b>	<b>\$ 95,871,056</b>	<b>\$ 94,162,142</b>	<b>\$ 20,189,463</b>	<b>\$ 462,200</b>	<b>\$ 477,453</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 1,404,973,932</b>

### **9.3 Vehicle Procurement (Committed)**

Miami-Dade Transit continues the procurement of new vehicles for each mode of transit to replace vehicles that have reached the end of their useful life. Metrobus vehicles are being procured for purposes of new service with the opening of the I-95 Express lanes as well as the planned Kendall Enhanced Bus Service corridor.

#### **9.3.1 Metrorail New Vehicle Replacement**

Miami-Dade County made the decision to pursue the procurement of new Metrorail and Metromover rail cars as opposed to rehabilitation of the existing 136 rail car fleet. The Board of County Commissioners has approved procurement of 136 new Metrorail vehicles at a cost of \$401.4 million. The new Metrorail vehicles will include more passenger inspired comfort interior features and a self-diagnostic system for early identification of mechanical issues. The replacement of the entire Metrorail fleet will occur over the next nine years when the project is expected to be complete by the end of FY 2018.

#### **9.3.2 Metromover New Vehicle Replacement**

In January 2006, following the Board of Commissioners approval, MDT secured a contract with Bombardier for the procurement of 29 new Metromover vehicles at a cost of \$26.7 million. As of 2008, 12 new Metromover cars have been placed in service and an additional 17 cars are set for purchase at a cost of \$42.4 million. The remaining 17 cars are scheduled to be put into service by mid FY 2012.

#### **9.3.3 Metrobus New Vehicle Procurement**

Miami-Dade Transit is currently pursuing the procurement of eighteen 40-foot diesel-electric hybrid buses and twenty-five 60-foot diesel-electric hybrid buses for use on the newly installed 95 Express Lanes and Kendall Enhanced Bus Service. Funding for replacement and rehabilitation of these MDT buses is provided through funds available from the People's Transportation Plan. Funds from Congestion Mitigation and Air Quality (CMAQ) Federal monies are also being contributed through the State of Florida. The cost to purchase the sixteen hybrid buses for operation within the I-95 Express corridor is \$13.8 million fully funded by FTA. MDT anticipates these new buses to begin service on I-95 in 2010.

#### **9.3.4 Fare Collection**

Miami-Dade Transit has received approval from the Board of County Commissioners on a contract with Cubic in the amount of \$42 million (not to exceed \$80 million) for new state-of-the-art Automated Fare Collection System equipment. The new Automated Fare Collection System (EASY Card) uses advanced technology that provides a reusable, reloadable fare card with an embedded computer chip. The EASY Card allows for passengers to apply desired amounts of money for transit fare on Metrorail and Metrobus. The EASY Card also assists in reducing the amount of fare evasion experienced on MDT system. Installation of MDT equipment is currently underway and set for completion in fall 2009.

## **9.4 Other Projects (Committed)**

The following projects include park and ride facility expansion, infrastructure rehabilitation, ITS, and other capital improvement projects for the MDT transit system and operational support facilities.

### **9.4.1 NW 7th Avenue Transit Village**

The NW 7th Street Transit Village is a mixed use development project that will be located on the southeast corner of NW 7th Avenue and NW 62nd Street. The proposed development consists of a mixed-use complex comprised of housing, retail, parking, and transit facilities. This facility will provide a transit connection for MDT buses and private jitneys. These transit facilities include bus bays and 150 parking spaces for transit users. The total estimated cost for this project is \$20 million and is scheduled to be advertised for development in 2010.

### **9.4.2 Park and Ride Facilities**

#### **Dadeland South Metrorail Station Parking Lot Expansion**

This project will include additional surface parking to an existing surface lot located on Dadeland Boulevard and Kendall Drive (facing US-1). Project construction is scheduled to complete in the summer of 2010.

#### **NW 186 Street/ 73rd Avenue**

This future park and ride location has approximately 125 parking spaces on a two (2) acre site located at NW 186 Street/ 73rd Avenue. Designs for the park and ride have already been completed and construction is anticipated to be completed by the end of 2010.

#### **Kendall Drive/ SW 127th Avenue**

Future park and ride location set on a 2.5 acre lot on southeast corner of SW 88th Street (Kendall Drive) and SW 127th Avenue. This site will have a total of 181 parking spaces and is anticipated for opening August 2012 with the beginning of the Kendall Enhanced Bus Service.

### **9.4.3 Additional Minor Park and Ride locations**

The following park and ride locations are proposed and in various stages of planning and implementation.

**Table 9-2: Proposed Parking Lots/Park and Ride/Garages under Negotiation**

<b>Park and Ride</b>	<b>Location</b>	<b>Number of Spaces</b>
Dolphin Station	NW 12th Street/ NW 107th Avenue	260
Northeast Passenger Activities Center	NE 15th Avenue/ NW 165th Street	25
Douglas Road Station	Under Guideway	50
Kendall Town Center	Kendall Drive/SW 162nd Avenue	45
Quail Roost	SW 186th Street/Busway	200
Busway/ SW 216th Street		150
SW 127th Avenue/ SW 104th Street (Killian Drive)		100
SW 127th Avenue/ SW 80th Street (Soccer Park)		200
SW 136th Court/ SW 72nd Street (Sunset Drive)		100

Source: FY 2010-2014 Transportation Improvement Program

#### **9.4.4 Transit Operating System Replacement Project**

Miami-Dade Transit will be replacing the existing Transit Operating System (TOS) platform to bring the existing antiquated system in line with state-of-the art technology. The total estimated cost is \$5.8 million and is anticipated to be implemented by FY 2012.

### **9.5 2008 TDP Operational Service Commitments**

Prior to presenting the committed bus service improvements it is necessary to first assess the commitments that were developed as part of the 2008 TDP update as submitted.

#### **9.5.1 Assessment of Implemented Bus Service Improvements and Adjustments (2008)**

For the 2008 MDT TDP a listing of committed bus service improvements for implementation were included. A consistency analysis of these improvements was performed for the TDP Major Update to measure MDT's adherence for implementation.

From January to December 2008, a total of 104 service changes were implemented by MDT which includes 50 additional changes from what was programmed to occur as stated in the 2008 MDT TDP. The 2008 TDP had programmed 55 committed bus service improvements and adjustments, and 54 were accomplished. This results in a

98 percent level of consistency when comparing the 2008 TDP committed service changes with what was actually implemented during this time frame. The results of the consistency analysis for improvements implemented between January and December 2008 is presented in the following table.

Each of the service changes are identified according to whether the service change was a programmed commitment of the 2008 TDP as indicated with a check mark or an additional service change that was not included in the 2008 TDP as marked by an asterisk.

**Table 9-3: 2008 TDP Consistency Analysis Summary**

<b>JANUARY to DECEMBER 2008</b>				
<b>Route</b>	<b>Description</b>	<b>Improvement / Adjustment</b>	<b>Start Date</b>	<b>2008 TDP Consistency</b>
√ Implemented service changes committed to in previous TDP				
* Implemented service change not included in previous TDP				
A	Miami Beach to Omni Terminal via Venetian Causeway	Adjust weekend service before 6 p.m. from 40 to 45 minutes	November 16, 2008	*
B	Key Biscayne to CBD via Rickenbacker Causeway	Discontinue segment from the Brickell Metrorail/Metromover station to downtown Miami	June 15, 2008	√
C	Miami Beach to CBD via Collins Avenue, Washington Avenue, and MacArthur Causeway	Weekday and Saturday schedule adjustments in both directions to improve schedule reliability	June 15, 2008	*
C	Miami Beach to CBD via Collins Avenue, Washington Avenue, and MacArthur Causeway	Realign the alignment into the CBD Terminal	November 16, 2008	*
J	Coral Gables to Miami Beach via LeJeune Road, 36 Street and Collins Avenue	Discontinue overnight service	June 15, 2008	√
K	Diplomat Mall to CBD via Collins Avenue and MacArthur Causeway	Discontinue segment from the Omni Bus Terminal to CBD	June 15, 2008	√
L	Miami Beach to Hialeah via Collins Avenue, 79 Street Causeway and 79 St	Extend last weekday and Saturday westbound trips from the Northside station to the Hialeah station	June 15, 2008	√



**Table 9-3: 2008 TDP Consistency Analysis Summary (continued)**

<b>JANUARY to DECEMBER 2008</b>				
<b>Route</b>	<b>Description</b>	<b>Improvement / Adjustment</b>	<b>Start Date</b>	<b>2008 TDP Consistency</b>
√ Implemented service changes committed to in previous TDP				
* Implemented service change not included in previous TDP				
L	Miami Beach to Hialeah via Collins Avenue, 79 Street Causeway and 79 St	Schedule an earlier weekday eastbound trip from the Hialeah station to depart at 4:52 a.m.	November 16, 2008	*
R	Surfside to south Miami Beach	Extend service from 85 Street to 88 Street and adjust weekday headway from 30 to 45 minutes	June 15, 2008	√
S	Aventura Mall to CBD via Miami Beach	Saturday schedule adjustments in both directions to improve schedule reliability and Sunday early evening southbound schedule will be improved to reduce overcrowding	June 15, 2008	*
S	Aventura Mall to CBD via Miami Beach	Realign the alignment into the CBD Terminal	November 16, 2008	*
R	Surfside to south Miami Beach	Extend service from 85 Street to 88 Street and adjust weekday headway from 30 to 45 minutes	June 15, 2008	√
V	Diplomat Mall to Golden Glades via Miami Beach and North Miami Beach	Discontinue entire route	June 15, 2008	√
1	South Miami Heights to Dadeland South Station via Busway	Adjust weekday peak headway from 24 to 30 minutes	June 15, 2008	√
3	Diplomat Mall to CBD via 163 Street Mall and Biscayne Boulevard	Realign the alignment into the CBD Terminal	November 16, 2008	*
6	Allapattah to Coconut Grove via Little Havana and Downtown Miami	Adjust weekday headway from 30 minutes during the peak and 45 minutes in the midday to every 60 minutes daily	June 15, 2008	√
10	163 Street Mall to CBD via NE 2 Avenue	Truncate route at Omni Bus Terminal instead of at the CBD Terminal	June 15, 2008	√
16	163 Street Mall to CBD via North Miami Beach and Biscayne Boulevard	Realign the alignment into the CBD Terminal	November 16, 2008	*

**Table 9-3: 2008 TDP Consistency Analysis Summary (continued)**

24	Westchester to CBD via Coral Way and Brickell Avenue	Adjust weekday peak headway from 15 to 20 minutes	June 15, 2008	√
32	Carol City to Omni via Opa-Locka, Northside, Liberty City and Civic Center	Adjust peak headway from 20 to 24 minutes, Saturday headway from 30 to 40 minutes and Sunday headway from 30 to 60 minutes	June 15, 2008	√
33	Hialeah Gardens to Miami Shores via 103rd Street (49 St) and 95th Street	Realign from NE 10 Avenue to Biscayne Boulevard between NE 79 Street and NE 96 Street.	June 15, 2008	√
Route 34 (Busway Flyer)	Dadeland South Station to Florida City via Busway and US-1	Improve peak headway from 12 minutes to 10 minutes and to 7½ minutes during the busiest part of the peak period. Several stops on the Busway to be discontinued for faster service	June 15, 2008	√
Route 34 (Busway Flyer)	Dadeland South Station to Florida City via Busway and US-1	Minor weekday morning schedule adjustments to improve reliability	November 16, 2008	√
Route 38 (Busway MAX)	Dadeland South Station to Florida City via Busway	Improve Saturday headway from 20 15 minutes and the Sunday headway from 24 to 20 minutes	June 15, 2008	*
Route 38 (Busway MAX)	Dadeland South Station to Florida City via Busway	Add two early morning Saturday trips to reduce overcrowding.	November 16, 2008	√
40	West Miami-Dade to Coral Gables via Bird Road	Adjust midday headway from 20 to 30 minutes	June 15, 2008	√
41	Allapattah station to Miami International and Dolphin Malls via NW 36/41 Street and NW 107 Avenue	Discontinue segment from NW 87 Avenue to Allapattah station. Discontinue weekend service	June 15, 2008	√
42	Golden Glades to Coconut Grove via LeJeune Road	Realign from Ponce de Leon Boulevard to LeJeune Road between West Flagler Street and Coral Way. Adjust midday headway from 40 to 60 minutes and Sunday headway from 45 to 60 minutes	June 15, 2008	√
48	Civic Center to South Miami via Overtown, CBD and Coral Gables	Discontinue segment from the Brickell Metrorail/Metromover station to downtown Miami. Adjust peak headway from 30 to 40 minutes and midday headway from 45 to 60 minutes	June 15, 2008	√

**Table 9-3: 2008 TDP Consistency Analysis Summary (continued)**

Route 51 (Flagler MAX)	Miami Beach to West Miami-Dade via MacArthur Causeway and West Flagler Street	Discontinue segment from the Omni Bus Terminal to south Miami Beach	June 15, 2008	√
Route 51 (Flagler MAX)	Miami Beach to West Miami-Dade via MacArthur Causeway and West Flagler Street	Realign the alignment into the CBD Terminal	November 16, 2008	*
52	South Miami station to Cutler Bay via South Miami, Busway, Perrine and Richmond Heights	Adjust weekend headway from 40 to 60 minutes	June 15, 2008	√
52	South Miami station to Cutler Bay via South Miami, Busway, Perrine and Richmond Heights	Extend six weekday trips to SW 127 Avenue in Goulds to replace the Route 216 which was discontinued	June 15, 2008	*
54	Hialeah to Liberty City via 54th Street	Change weekday afternoon trips to the High Schools to serve them later	November 16, 2008	*
57	Miami International Airport to Pinecrest	Adjust peak headway from 30 to 40 minutes	June 15, 2008	√
62	Hialeah to Omni via NW/NE 62 Street and Biscayne Boulevard	Adjust weekend evening headway from 20 to 24 minutes after 8 p.m. and from 20 to 30 minutes after 10 p.m.	June 15, 2008	*
Route 68 (Gratigny Connection)	Hialeah Gardens City Hall to MDC North Campus via NW 122 St (West 68 Street)	Discontinue entire route	June 15, 2008	√
73	Miami Lakes to Dadeland South Station via Milam Dairy road and Ludlam Road	Adjust Sunday Headway from 40 to 60 minutes	June 15, 2008	√
77	Norwood to CBD via NW 7 Avenue	Discontinue overnight service	June 15, 2008	√
82	Coral Way to Bird Road via SW 82 Avenue	Discontinue entire route	June 15, 2008	√
Route 93 (Biscayne MAX)	Aventura Mall to CBD via Biscayne Boulevard	Realign the alignment into the CBD Terminal	November 16, 2008	*

**Table 9-3: 2008 TDP Consistency Analysis Summary (continued)**

95 Express	Downtown Miami, Golden Glades, Civic Center, Carol City, Aventura, West Dade	Discontinue midday service to downtown Miami and the Civic Center	June 15, 2008	√
95 Express	Downtown Miami, Golden Glades, Civic Center, Carol City, Aventura, West Dade	Realign the alignment into the CBD Terminal	November 16, 2008	*
104	Dadeland North Station to Kendall via SW 104 Street	Extend weekend trips ending at Hammocks Boulevard to MDC Kendall Campus	June 15, 2008	*
Route 120 (Beach MAX)	Bal Harbour to CBD via Miami Beach and Omni Terminal	Change the current Route T into a full limited-stop route between Haulover Park and downtown Miami	June 15, 2008	√
Route 132 (Tri-Rail Doral Shuttle)	Tri-Rail station to Koger via NW 36 Street	Add an earlier westbound trip departing the Hialeah Marketplace station	June 15, 2008	*
147	Dolphin Mall to Hammocks via SW 147 Avenue	Discontinue entire route	June 15, 2008	√
Route 183 (183 Street MAX)	Golden Glades Park/Ride Lot to Central Miami via NW 7 Avenue	Daily schedule adjustments to improve on-time performance	June 15, 2008	√
Route 212 (Sweetwater Circulator)	Sweetwater	Adjust weekday and Saturday headway from 15/20 minutes to 30 minutes	June 15, 2008	√
Route 216 (Goulds Connection)	West Goulds to Cutler Ridge Terminal	Discontinue entire route	June 15, 2008	√
Route 240 (Bird Road MAX)	Dadeland North station to West Miami-Dade via Bird Road	Discontinue three low ridership eastbound trips	June 15, 2008	√
Route 241 (North Dade Connection)	California Club to Miami Lakes via Uleta and Opa-Locka	Discontinue entire route	June 15, 2008	√
Route 242 (Doral Connection)	Okeechobee Station to Dolphin Mall via Koger, Doral and Airport West	Discontinue entire route	June 15, 2008	√
Route 243 (Seaport Connection)	CBD to Port of Miami	Discontinue midday service	June 15, 2008	√

**Table 9-3: 2008 TDP Consistency Analysis Summary (continued)**

Route 245 (Okeechobee Connection)	Okeechobee Metrorail station to Hialeah Gardens via Okeechobee/Frontage Roads and Medley Industrial Parks	Discontinue entire route	June 15, 2008	√
Route 246 (Night Owl)	Downtown Miami, Miami Beach, North Miami Beach, Opa-locka, Civic Center	Realign the alignment into the CBD Terminal	November 16, 2008	*
Route 249 (Coconut Grove Circulator)	Coconut Grove station to Douglas Road station via SW 27 Avenue, Grand Avenue and SW 37 Avenue	Adjust weekend evening headway from 15 to 20 minutes from 7 to 9 p.m. and from 15 to 30 minutes after 9 p.m.	June 15, 2008	√
Route 252 (Coral Reef MAX)	Dadeland South Station to Country Walk via Coral Reef Drive	Adjust peak headway from 15 to 20 minutes and Saturday headway from 40 to 60 minutes	June 15, 2008	√
Route 252 (Coral Reef MAX)	Dadeland South Station to Country Walk via Coral Reef Drive	Weekday southbound schedule from the Dadeland South station between 5 p.m. and 6 p.m. will be improved to every 15 minutes to reduce overcrowding	November 16, 2008	*
Route 272 (Sunset KAT)	Kendall to Dadeland North Metrorail station via Sunset Drive	Add a later morning eastbound trip to allow 10 minute frequency to continue later	June 15, 2008	√
Route 272 (Sunset KAT)	Kendall to Dadeland North Metrorail station via Sunset Drive	Adjust evening westbound trips after 6:30 p.m. to better match Metrorail service	November 16, 2008	*
Route 278 (Flagami Connection)	Flagami/West Miami area between Tamiami Boulevard and NW/SW 57 Avenue	Discontinue entire route	June 15, 2008	√
Route 282 (Hialeah Gardens Connection)	Miami Lakes to Hialeah Gardens to Palmetto Metrorail station via NW 82 and NW 87 Avenues	Adjust peak headway from 30 to 40 minutes	June 15, 2008	√
Route 287 (Saga Bay MAX)	Dadeland South Station to Saga Bay via Busway and SW 87 Avenue	Minor weekday schedule adjustments in both directions to improve schedule reliability	June 15, 2008	*

**Table 9-3: 2008 TDP Consistency Analysis Summary (continued)**

Route 288 (Kendall KAT)	West Kendall to Dadeland North Metrorail station via Kendall Drive	Add a 9 a.m. eastbound trip which extends the morning peak period service span	June 15, 2008	√
Route 288 (Kendall KAT)	West Kendall to Dadeland North Metrorail station via Kendall Drive	Discontinue the portion of the route on SW 88 Street west of SW 157 Avenue	November 16, 2008	*

Source: Miami-Dade Transit, 2009

## 9.6 Committed Bus Service Improvements and Adjustments (2009)

MDT's goal is to restructure the existing bus route network to better meet the transportation needs of the Miami-Dade County. The revised bus route system should reduce duplicate routes, improve service on major corridors, and increase ridership with new routes and greater market penetration while maintaining the departmental budget.

The following committed service adjustments will effectively match the service capacity to ridership demand resulting in a more efficient system. A listing of the committed bus service improvements and adjustments that are planned to occur between the January to December 2009 timeframe is presented in the following table.

**Table 9-4: 2009 Committed Bus Service Improvements/Adjustments**

Route	Description	Improvement / Adjustment
A	Miami Beach to Omni Terminal via Venetian Causeway	Adjust evening headway from 20 to 40 minutes seven days a week
B	Key Biscayne to CBD via Rickenbacker Causeway	Truncate all trips at Brickell station
E	Miami Lakes to Aventura Mall via Opa-Locka, North Miami Beach, Sunny Isles and Lehman Causeway	Adjust weekend headway from 45 to 60 minutes
E	Golden Glades to Hallandale Beach via Aventura Mall	Extend from Aventura Mall to Turnberry & Hallandale Beach
E	Golden Glades to Hallandale Beach via Aventura Mall	Discontinue west end segment and merge with Route 28 into a new 135 Street Crosstown route.
G	Opa-locka to Miami Beach via NW 22 Avenue, NW 125 Street, Broad Causeway and Collins Avenue	Adjust weekend headway from 30 to 40 minutes
G	Opa-locka to Surfside via NW 22 Avenue, NW 125 Street and Broad Causeway	Discontinue segment south of Collins Avenue & 96 Street and extend western alignment to serve the North Dade Health Center
H	North Miami Beach to Miami Beach via 163 Street and Collins Avenue	Discontinue southbound loop around 163 Street Mall
H	North Miami Beach to Miami Beach via 163 Street and Collins Avenue	Adjust Saturday headway from 20 to 30 minutes
H	North Miami Beach to Miami Beach via 163 Street and Collins Avenue	Discontinue segment south of Collins Avenue & 72 Street
H	North Miami Beach to Miami Beach via 163 Street and Collins Avenue	Adjust peak headway from 20 to 24 minutes
H	North Miami Beach to Miami Beach via 163 Street and Collins Avenue	Adjust midday headway from 20 to 24 minutes
H	North Miami Beach to Miami Beach via 163 Street and Collins Avenue	Realign to NE 19 Avenue between 164 and 171 Street



**Table 9-4: 2009 Committed Bus Service Improvements/Adjustments (continued)**

Route	Description	Improvement / Adjustment
J	Coral Gables to Miami Beach via LeJeune Road and 36 Street	Adjust Saturday headway from 20 to 30 minutes
J	Miami International Airport to Miami Beach via 36 Street and 41 Street on the Beach	Discontinue segment from 41st Street to 72nd Street on the beach and the segment from the Airport to Coconut Grove
J	Miami International Airport to Miami Beach via 36 Street and 41 Street on the Beach	Adjust peak headway from 15 to 20 minutes
K	Diplomat Mall to CBD via Collins Avenue and MacArthur Causeway	Adjust weekend headway from 20 to 30 minutes-June
K	Diplomat Mall to CBD via Collins Avenue and MacArthur Causeway	Discontinue entire route and merge into other beach routes including the mid-North Beach Connection
L	Miami Beach to Hialeah via Collins Avenue, 79 Street Causeway and 79 Street	Adjust weekday running times to improve schedule reliability
L	Miami Beach to Hialeah via Collins Avenue, 79 Street Causeway and 79 Street	Adjust peak headway from 10 to 12 minutes
M	Civic Center to Miami Beach via Omni Terminal and MacArthur Causeway	Discontinue loop south of 5th Street on Miami Beach-June
M	Civic Center to Miami Beach via Omni Terminal and MacArthur Causeway	Adjust peak headway from 30 to 45 minutes-June
M	Civic Center to Miami Beach via Omni Terminal and MacArthur Causeway	Adjust midday headway from 45 to 60 minutes
M	Civic Center to Miami Beach via Omni Terminal and MacArthur Causeway	Re-implement loop south of 5th Street on Miami Beach-December
M	Civic Center to Miami Beach via Omni Terminal and MacArthur Causeway	Adjust peak headway from 45 to 60 minutes-December
R	Surfside to south Miami Beach	Discontinue last round trip-June
R	Surfside to south Miami Beach	Discontinue entire route and merge into other beach routes including the mid-North Beach Connection
S	Aventura Mall to CBD via Miami Beach	Improve Sunday headway from 20 to 15 minutes
1	South Miami Heights to Dadeland South Station via Busway	Adjust peak headway from 30 to 40 minutes - June
1	South Miami Heights to Dadeland South Station via Busway	Adjust weekend headway from 40 to 60 minutes - June
1	South Miami Heights to Busway/SW 168 Street Station	Discontinue segment on Busway and provide feeder service only.
1	South Miami Heights to Busway/SW 168 Street Station	Improve peak headway from 40 to 30 minutes-December
1	South Miami Heights to Busway/SW 168 Street Station	Improve midday headway from 40 to 30 minutes- December
1	South Miami Heights to Busway/SW 168 Street Station	Improve Saturday headway from 60 to 40 minutes – December



**Table 9-4: 2009 Committed Bus Service Improvements/Adjustments (continued)**

Route	Description	Improvement / Adjustment
1	South Miami Heights to Busway/SW 168 Street Station	Improve Sunday headway from 60 to 40 minutes - December
3	Diplomat Mall to CBD via 163 Street Mall and Biscayne Boulevard	Terminate weekend evening northbound trips arriving at 12:30/1:30 a.m. at Aventura Mall-June
3	Aventura Mall to CBD via 163 Street Mall and Biscayne Boulevard	Discontinue Aventura Mall to Hallandale segment-December
3	Aventura Mall to CBD via 163 Street Mall and Biscayne Boulevard	Improve Saturday headway from 20 to 15 minutes
3	Aventura Mall to CBD via 163 Street Mall and Biscayne Boulevard	Improve Sunday headway from 24 to 20 minutes
7	Dolphin Mall to CBD via Miami International Mall, Fontainebleau, NW 7 Street and Little Havana	Discontinue Miami International Airport/Miami Springs branch
9	Aventura Mall to CBD via 163 Street Mall and NE 2 Avenue	Add an additional Sunday evening roundtrip to the schedule
10	Skylake to CBD via NE 15 Avenue and NE 2 Avenue	Discontinue segment on Miami Avenue and extend to Skylake via NE 15 Avenue
12	Northside Station to Mercy Hospital via Liberty City, Allapattah, Civic Center, Little Havana and Coconut Grove	Adjust weekend headway from 30 to 40 minutes
16	163 Street Mall to Omni Terminal via North Miami Beach and Biscayne Boulevard	Discontinue segment from Omni Terminal to the CBD
16	163 Street Mall to Omni Terminal via North Miami Beach and Biscayne Boulevard	Improve peak headway from 20 to 18 minutes
16	163 Street Mall to Omni Terminal via North Miami Beach and Biscayne Boulevard	Adjust midday headway from 20 to 24 minutes
16	163 Street Mall to Omni Terminal via North Miami Beach and Biscayne Boulevard	Improve Saturday headway from 30 to 24 minutes
17	Norwood to Vizcaya Station via NW 17 Avenue	Discontinue low ridership trips
21	Opa-Locka to CBD via Northside, Liberty City, Allapattah, Civic Center and Overtown	Discontinue NW 79 Street to NW 167 Street segment
21	Opa-Locka to CBD via Northside, Liberty City, Allapattah, Civic Center and Overtown	Adjust weekend headway from 30 to 40 minutes
22	163 Street Mall to Douglas Road station via Golden Glades, NW 22 Avenue and Coconut Grove	Last two Saturday night trips ending at Golden Glades will be extended to the 167 Street Terminal. Add late evening Sunday trips to/from Coconut Grove
22	163 Street Mall to Douglas Road station via Golden Glades, NW 22 Avenue and Coconut Grove	Discontinue Civic Center segment
24	Westchester to CBD via Coral Way and Brickell Avenue	Discontinue weekend alternate trips at SW 24 Street/88 Avenue

**Table 9-4: 2009 Committed Bus Service Improvements/Adjustments (continued)**

Route	Description	Improvement / Adjustment
24	CBD to West Dade via Coral Way	Merge with Route 224 (Coral Way MAX)
27	Carol City to Coconut Grove via 27th Avenue	Improve Sunday headway from 30 to 20 minutes
28	FIU Biscayne Bay Campus to Hialeah Station via 135th Street and East 4th Avenue	Adjust midday headway from 40 to 60 minutes
28	FIU Biscayne Bay Campus to Hialeah Station and Miami Lakes via 135th Street, East 4th Avenue and NW 60 Avenue	Combine route with Route E west end for new 135 Street Crosstown Route
29	Miami Lakes to Hialeah	Adjust peak headway from 30 to 45 minutes
Route 31 (Busway Local)	Dadeland South Station to South Dade Government Center via Busway	Adjust peak headway from 15 to 20 minutes - June
Route 31 (Busway Local)	Dadeland South Station to South Dade Government Center via Busway	Improve peak headway from 20 to 15 minutes – Dec
32	Carol City to Omni via Opa-Locka, Northside, Liberty City and Civic Center	Discontinue low ridership trips
33	Hialeah Gardens to Miami Shores via 103rd Street (49 St) and 95th Street	Adjust midday headway from 30 to 35 minutes
33	Hialeah Gardens to Miami Shores via 103rd Street (49 St) and 95th Street	Adjust Sunday headway from 30 to 45 minutes prior to 9 a.m.
35	MDC Kendall Campus to Florida City via Busway, US-1	Adjust weekend headway to 30 to 60 minutes
36	Dolphin Mall to Biscayne Boulevard via NW 36/41 Streets and Koger Office Park and Miami Springs	Restructure Route 36 and 41 into one route and discontinue segment to Omni via Biscayne Boulevard
37	Hialeah to South Miami via Palm Avenue and Douglas Road	Discontinue last two weekday southbound trips ending at MIA Terminal
Route 38 (Busway MAX)	Dadeland South Station to Florida City via Busway	Adjust running times seven days a week
Route 38 (Busway MAX)	Dadeland South Station to Florida City via Busway	Improve peak headway from 15 to 12 minutes
40	West Miami-Dade to Coral Gables via Bird Road	Adjust peak headway from 20 to 24 minutes- June
40	West Miami-Dade to Coral Gables via Bird Road	Discontinue eastbound service after 10 p.m. and westbound service after 11 p.m. seven days a week
40	West Miami-Dade to Coral Gables via Bird Road	Adjust weekend headway from 30 to 60 minutes. Discontinue University Lakes branch on weekends
40	West Miami-Dade to Coral Gables via Bird Road	Merge with Route 240 (Bird Road MAX) and assume EOL loop from MAX route

**Table 9-4: 2009 Committed Bus Service Improvements/Adjustments (continued)**

Route	Description	Improvement / Adjustment
40	West Miami-Dade to Coral Gables via Bird Road	Improve peak headway from 24 to 15 minutes – Dec
42	Golden Glades to Coconut Grove via LeJeune Road	Adjust Saturday headway from 40 to 60 minutes- June
42	Opa-Locka Tri-Rail to Douglas Road Station	Discontinue segment from Douglas Road Station to Coconut Grove Station and segment from Opa-Locka Tri-Rail Station to Golden Glades
42	Opa-Locka Tri-Rail to Douglas Road Station	Improve peak headway from 30 to 15 minutes
42	Opa-Locka Tri-Rail to Douglas Road Station	Improve midday from 60 to 30 minutes
42	Opa-Locka Tri-Rail to Douglas Road Station	Improve Saturday headway from 60 to 30 minutes-December
42	Opa-Locka Tri-Rail to Douglas Road Station	Improve Sunday headway from 60 to 30 minutes
Route 46 (Liberty City Connection)	Caleb Center to NW 7 Avenue/NW 62 Street via NW 46 Street, NW 54 Street and NW 10 Avenue	Adjust peak headway from 30 to 40 minutes
48	Brickell station to University station via Brickell Avenue, Bayshore Drive and Coral Gables	Adjust peak headway from 40 to 60 minutes
Route 51 (Flagler MAX)	CBD to west Miami-Dade via West Flagler Street	Discontinue segment from CBD to Omni Terminal
52	Dadeland South station to Cutler Bay via Busway, Perrine and Richmond Heights	Discontinue segment from Dadeland South Station to South Miami Station
52	Dadeland South station to Cutler Bay via Busway, Perrine and Richmond Heights	Adjust midday headway from 40 to 45 minutes
54	Hialeah to Liberty City via 54th Street	Adjust peak headway from 20 to 24 minutes
54	Hialeah to Liberty City via 54th Street	Discontinue several Sunday trips resulting in a 60 minute headway in the early a.m. and will start the evening 60 minute headway earlier
54	Hialeah to Liberty City via 54th Street	Truncate alternate trips at West 60 Street. Merge with Route 282
56	Coral Gables to Lakes of the Meadow/MDC Kendall Campus via Miller Road and SW 107/177 Avenues	Adjust midday headway from 30 to 60 minutes and discontinue midday service on the MDC Kendall Campus branch
56	Coral Gables to Lakes of the Meadow/MDC Kendall Campus via Miller Road and SW 107/177 Avenues	Discontinue last eastbound trip of the night which operates from MDC Kendall Campus to Miami Children's Hospital
57	Miami International Airport to Pinecrest	Discontinue 1st AM northbound trip and 2nd to last PM southbound trip
62	Hialeah to Omni via 62nd Street and Biscayne Boulevard	Adjust Sunday headway from 20 to 30 minutes

**Table 9-4: 2009 Committed Bus Service Improvements/Adjustments (continued)**

<b>Route</b>	<b>Description</b>	<b>Improvement / Adjustment</b>
62	Hialeah to Omni via 62nd Street and Biscayne Boulevard	Discontinue segment along Biscayne Boulevard
62	Hialeah to Omni via 62nd Street and Biscayne Boulevard	Reduce Miami Beach trips to four per peak
62	Hialeah to Omni via 62nd Street and Biscayne Boulevard	Improve Sunday headway from 30 to 24 minutes
65	Coconut Grove to Pinecrest via Busway and Old Cutler Road	Adjust peak headway from 30 to 45 minutes - June
65	Coconut Grove to Pinecrest via Busway and Old Cutler Road	Merge with Route 136
70	Cutler Ridge to Florida City via Naranja, Goulds, Princeton and Homestead	Adjust midday headway from 30 to 60 minutes
71	Dolphin Mall to MDC Kendall Campus via 107th Avenue	Adjust midday headway from 40 to 60 minutes
71	Dolphin Mall to MDC Kendall Campus via 107th Avenue	Adjust Saturday headway from 40 to 60 minutes
71	Dolphin Mall to MDC Kendall Campus via 107th Avenue and Sweetwater	Absorb Route 212 (Sweetwater Circulator) segment
72	Coral Gables to Kendall via SW 57 Avenue and Sunset Drive	Adjust weekend headway from 30 to 45 minutes
73	Miami Lakes to Dadeland South Station via Milam Dairy Road and Ludlam Road	Adjust midday headway from 30 to 40 minutes
73	Miami Lakes to Dadeland South Station via Milam Dairy Road and Ludlam Road	Adjust Saturday headway from 40 to 60 minutes - June
73	Miami Gardens Drive to Dadeland South Station via Ludlam Road and Milam Dairy Road	Combine with Route 267 MAX on northern segment
73	Miami Gardens Drive to Dadeland South Station via Ludlam Road and Milam Dairy Road	Discontinue segment to Miami Lakes Tech
73	Miami Gardens Drive to Dadeland South Station via Ludlam Road and Milam Dairy Road	Improve peak headway from 30 to 20 minutes
73	Miami Gardens Drive to Dadeland South Station via Ludlam Road and Milam Dairy Road	Improve Saturday headway from 60 to 40 minutes - Dec
75	Miami Lakes Tech to MDC North Campus via 175 Street, Miami Gardens Drive, West Dixie Highway and 119 Street	Discontinue Sunday service after 7 p.m.
75 North	Miami Lakes Tech to MDC North Campus via 175 Street, Miami Gardens Drive, West Dixie Highway and 119 Street	Split existing Route 75 into two routes. Extend northern route to FIU and existing segments of Route 83 being discontinued

**Table 9-4: 2009 Committed Bus Service Improvements/Adjustments (continued)**

Route	Description	Improvement / Adjustment
77	Norwood to CBD via NW 7th Avenue	Truncate alternate trips at Golden Glades. Service to Norwood would be every other trip.
Route 79 (79 Street MAX)	Miami Beach to Northside Metrorail station via 79th Street, JFK Causeway and 71st Street	New limited-stop service operating during the weekday peak periods only every 24 minutes
83	Miami Lakes to 163 Street Mall via Miami Gardens Drive	Restructure Route 83 and 183 into one route and discontinue segments along NW 67 Avenue, NW 177 Street, NE 191 Street, NE 6 Avenue and FIU
83	Miami Lakes to 163 Street Mall via Miami Gardens Drive	Improve peak headway from 15 to 12 minutes
83	Miami Lakes to 163 Street Mall via Miami Gardens Drive	Improve midday headway from 30 to 20 minutes
83	Miami Lakes to 163 Street Mall via Miami Gardens Drive	Improve Saturday headway from 30 to 20 minutes
83	Miami Lakes to 163 Street Mall via Miami Gardens Drive	Improve Sunday headway from 30 to 24 minutes
87	Okeechobee station to Dadeland North station via 87th Avenue	Adjust Sunday headway from 40 to 60 minutes
87	Okeechobee station to Dadeland North station via 87th Avenue	Adjust weekday headway to 32 minutes
88	Dadeland North station to Kendall via SW 88 Street	Discontinue service after midnight seven days a week
88	Dadeland North station to Kendall via SW 88 Street	Adjust Saturday headway from 20 to 24 minutes
91	Miami Lakes to 163 Street Mall via Carol City, California Club and North Miami Beach	Adjust peak headway from 30 to 45 minutes - June
91	Miami Lakes to 163 Street Mall via Carol City, California Club and North Miami Beach	Combine with Route 99
91	Miami Lakes to 163 Street Mall via Carol City, California Club and North Miami Beach	Improve peak headway from 45 to 24 minutes - Dec
91	Miami Lakes to 163 Street Mall via Carol City, California Club and North Miami Beach	Improve midday headway from 60 to 30 minutes
91	Miami Lakes to 163 Street Mall via Carol City, California Club and North Miami Beach	Improve Saturday headway from 60 to 40 minutes
91	Miami Lakes to 163 Street Mall via Carol City, California Club and North Miami Beach	Improve Sunday headway from 60 to 40 minutes
93 (Biscayne MAX)	Aventura Mall to CBD via Biscayne Boulevard	Adjust peak headway from 15 to 18 minutes
95 Express	Downtown Miami, Golden Glades, Civic Center, Carol City, Aventura, West Dade	Discontinue 6 low ridership trips
95 Express	Downtown Miami, Golden Glades, Civic Center, Carol City, Aventura, West Dade	Discontinue feeder segment of the Miami Avenue (Norwood) trips

**Table 9-4: 2009 Committed Bus Service Improvements/Adjustments (continued)**

<b>Route</b>	<b>Description</b>	<b>Improvement / Adjustment</b>
95 Express	Downtown Miami, Golden Glades, Civic Center, Carol City, Aventura, West Dade	Restructure feeder segments into separate routes
Route 97 (27 Avenue MAX)	Carol City to Dr. Martin Luther King, Jr. Station via NW 27 Avenue	Adjust midday headway from 30 to 40 minutes
99	Miami Gardens to Aventura Mall via Carol City, California Club and North Miami Beach	Adjust midday headway from 30 to 60 minutes
99	Miami Gardens to Aventura Mall via Carol City, California Club and North Miami Beach	Discontinue route and merge with Route 91
104	Dadeland North Station to Kendall via SW 104 Street	Adjust midday headway from 30 to 60 minutes
104	Dadeland North Station to Kendall via SW 104 Street	Adjust weekend headway from 30 to 60 minutes
Route 120 (Beach MAX)	Aventura Mall to CBD via Collins Avenue, Washington Avenue and MacArthur Causeway	Extend route to Aventura Mall on the north end. Realign south of 41 Street onto Collins Avenue, Washington Avenue south of 17th Street and MacArthur Causeway
Route 120 (Beach MAX)	Aventura Mall to CBD via Collins Avenue, Washington Avenue and MacArthur Causeway	Improve peak headway from 24 to 12 minutes
Route 120 (Beach MAX)	Aventura Mall to CBD via Collins Avenue, Washington Avenue and MacArthur Causeway	Improve midday headway from 30 to 12 minutes
Route 120 (Beach MAX)	Aventura Mall to CBD via Collins Avenue, Washington Avenue and MacArthur Causeway	Improve Saturday headway from 30 to 15 minutes
Route 123 (South Beach Local)	Miami Beach	Realign and extend service to Belle Isle and Collins Park
Route 123 (South Beach Local)	Miami Beach	Revise loop alignments
135 (135 Street Crosstown)	FIU Biscayne Bay Campus to Hialeah Station and Miami Lakes via 135th Street, East 4th Avenue and NW 60 Avenue	Restructure Route 28 and Route E into new Route 135 Street Crosstown with two branches (Miami Lakes and Hialeah Station)
136	SW 137 Avenue to Dadeland South via SW 120th/136th Street	Extend route on west end to serve the INS center on SW 147 Avenue
136	SW 137 Avenue to Dadeland South via SW 120th/136th Street	Merge with Route 65
136	SW 137 Avenue to Dadeland South via SW 120th/136th Street	Adjust peak headway from 30 to 45 minutes
Route 137 (West Dade Connection)	Dolphin Mall to Cutler Ridge via SW 137 Avenue	Adjust midday headway from 30 to 45 minutes



**Table 9-4: 2009 Committed Bus Service Improvements/Adjustments (continued)**

Route	Description	Improvement / Adjustment
Route 137 (West Dade Connection)	Dolphin Mall to Cutler Ridge via SW 137 Avenue	Discontinue low ridership trip
Route 183 (183 Street MAX)	Golden Glades Park/Ride Lot to Central Miami via NW 7 Avenue	Discontinue segment from Aventura to FIU.
Route 183 (183 Street MAX)	Golden Glades Park/Ride Lot to Central Miami via NW 7 Avenue	Merge with Route 83 into single route.
Route 183 (183 Street MAX)	Golden Glades Park/Ride Lot to Central Miami via NW 7 Avenue	Discontinue service after 7 p.m.
Route 202 (Little Haiti Circulator)	INS Office to NW 36 Street via 79 Street and NE 2 Avenue	Adjust peak headway from 30 to 40 minutes
Route 202 (Little Haiti Circulator)	INS Office to NW 36 Street via 79 Street and NE 2 Avenue	Discontinue service after 7 p.m.
Route 202 (Little Haiti Circulator)	INS Office to NW 36 Street via 79 Street and NE 2 Avenue	Discontinue entire route and merge with Routes 2, 9, 10, and L
Route 212 (Sweetwater Circulator)	Sweetwater	Discontinue route and merge into Route 71
Route 224 (Coral Way MAX)	Douglas Road Station to West Dade via Coral Way	Discontinue route and merge with Route 24
Route 238 (East-West Connection)	Earlington Heights Station to Dolphin Mall via Miami International Airport, Blue Lagoon, Airport West and Miami International Mall	Adjust peak headway from 30 to 45 minutes
Route 238 (East-West Connection)	Earlington Heights Station to Dolphin Mall via Miami International Airport, Blue Lagoon, Airport West and Miami International Mall	Realign to serve the Airport Corporate Center
Route 238 (East-West Connection)	Earlington Heights Station to Dolphin Mall via Miami International Airport, Blue Lagoon, Airport West and Miami International Mall	Discontinue low ridership trips
Route 243 (Seaport Connection)	CBD to Port of Miami	Adjust peak headway from 20 to 30 minutes
Route 243 (Seaport Connection)	CBD to Port of Miami	Realign to Overtown station from CBD

**Table 9-4: 2009 Committed Bus Service Improvements/Adjustments (continued)**

Route	Description	Improvement / Adjustment
Route 246 (Night Owl)	Downtown Miami, Miami Beach, North Miami Beach, Opa-Locka, Civic Center	Restructure route to only operate between the CBD and 163 Street Mall via the mainline and discontinue the beach portion
Route 248 (Brickell Key Shuttle)	Brickell Avenue to Brickell Key Island	Adjust peak headway from 15 to 20 minutes
Route 249 (Coconut Grove Circulator)	Coconut Grove Metrorail station to Douglas Road Metrorail via SW 27 Avenue, Grand Avenue, SW 37 Avenue	Discontinue alignment spur west of Douglas Road
Route 249 (Coconut Grove Circulator)	Coconut Grove Metrorail station to Douglas Road Metrorail via SW 27 Avenue, Grand Avenue, SW 37 Avenue	Adjust daily headway from 15 to 18 minutes
Route 249 (Coconut Grove Circulator)	Coconut Grove Metrorail station to Douglas Road Metrorail via SW 27 Avenue, Grand Avenue, SW 37 Avenue	Discontinue last weekday roundtrip
Route 252 (Coral Reef MAX)	Dadeland South Station to Country Walk via Coral Reef Drive	Adjust midday headway from 30 to 60 minutes
Route 252 (Coral Reef MAX)	Dadeland South Station to Country Walk via Coral Reef Drive	Discontinue segment to Deerwood Industrial Park
Route 254 (Brownsville Circulator)	Brownsville station to Caleb Center	Discontinue last trip at 3 p.m.
Route 267 (Ludlam MAX)	Golf Club of Miami to Okeechobee Station via Ludlam Road/West 12 Avenue	Adjust peak headway from 20 to 30 minutes- June
Route 267 (Ludlam MAX)	Golf Club of Miami to Okeechobee Station via Ludlam Road/West 12 Avenue	Discontinue route and combine with Route 73- December
Route 272 (Sunset KAT)	Kendall to Dadeland North Metrorail station via Sunset Drive	Adjust peak headway from 9 to 10 minutes
Route 277 (7 Avenue MAX)	Golden Glades to CBD via NW 7th Avenue	Discontinue 4 northbound and 4 southbound trips
Route 282 (Hialeah Gardens Connection)	Miami Lakes to Hialeah Gardens to Palmetto Metrorail station via NW 82 and NW 87 Avenues	Reduce peak period service span by one hour for each peak period- June
Route 282 (Hialeah Gardens Connection)	Miami Lakes to Hialeah Gardens to Palmetto Metrorail station via NW 82 and NW 87 Avenues	Discontinue route and combine with Route 54- December



**Table 9-4: 2009 Committed Bus Service Improvements/Adjustments (continued)**

Route	Description	Improvement / Adjustment
Route 287 (Saga Bay MAX)	Dadeland South Station to Saga Bay via Busway and SW 87 Avenue	Discontinue low ridership trips
Route 288 (Kendall KAT)	Dadeland North Station to West Kendall via Kendall Drive	Discontinue low ridership trips
344	MDC Homestead Campus to Florida City City Hall via Krome Avenue, and East/West Palm Drive	Adjust peak headway from 30 to 60 minutes
Northeast Lifeline	Serving Skylake, California Club area, and 163 <sup>rd</sup> Street Mall	Contracted route to be discontinued in December
Dade-Monroe Express	Florida City to Key Large, Islamorada, and Marathon	Contracted route- Discontinue one early AM and evening trip

Source: Miami-Dade Transit, 2009

### 9.6.1 Urban Corridor Development

As part of the State's Transit Corridor Program FDOT Funds are available and will result in the continuation of several MDT Metrobus routes. These routes include the Flagler MAX (Route 51) service from west Miami-Dade to the CBD, the Busway MAX (Route 38) which provides service from the Dadeland South Metrorail station to Florida City and the future I-95 Managed Lanes Express bus service scheduled to begin service in January 2010. In addition several other South Miami-Dade Busway routes that will continue to benefit from this program include: the Busway Local (Route 31) with service from Dadeland South Metrorail station to Cutler Bay and the Coral Reef MAX (Route 252) via Coral Reef Drive from Country Walk to the Dadeland South Metrorail station. Route 287 operates from Saga Bay to the Dadeland South Metrorail station.

## 9.7 Infrastructure Renewal Program – Committed Projects

The following section lists those committed projects that are proposed to be implemented during the FY 2009 – 2010 timeframe. These project commitments are based on an Infrastructure Renewal Program (IRP) evaluation and prioritization process that is further explained in the next section.

### 9.7.1 IRP Project Prioritization and Budget Approval Process Procedure

Miami-Dade Transit has developed an updated procedure for identifying, evaluating, prioritizing, and programming capital improvement projects. This process is illustrated in Figure 9-1, with the detailed procedure included in the Appendix.

The project development process begins by capital project requests coming from either external sources (i.e. the general public, other Miami-Dade County Departments, State Legislature) or internal (MDT Divisions or individuals). The applicable MDT Division then appoints a Project Originator (individual that processes

the paperwork associated with obtaining project approval, prioritization, and programming), and the Project Manager.

A completed Project Prioritization and Budget Approval Form (PPBA) is submitted to the MDT Office of Strategic Planning and Performance Measurement (OSPPM), which coordinates the review of the project request with the Planning Advisory Board. The Planning Advisory Board consists of nine MDT staff members:

- Assistant Director, Rail Services
- Assistant Director, Bus Services
- Senior Chief, Information Technology
- Chief, Infrastructure, Engineering and Maintenance
- Chief, Strategic Planning and Performance Management (Co-Chair)
- Chief, Office of Safety and Security
- Chief, Design and Engineering
- Chief, Quality Assurance
- Chief, Budget and Performance Reporting (Co-Chair)

The Planning Advisory Board holds one or more meetings to discuss and prioritize the submitted project request. Each project is assigned into one of five categories:

1. Existing project in TIP (Transportation Improvement Program), IRP (Infrastructure Renewal Program), OSP (Operational Support Project), or CIP (Capital Improvement Program) for implementation with local, state, and federal sources.
2. New project approved for implementation. Add the project to the TIP, IRP, OSP, or CIP.
3. Project to be placed on hold for next year's funding cycle.
4. Project to be placed on hold for next planning cycle (project does not exist in TIP, IRP, OSP, or CIP), or
5. Rejected.

The Planning Advisory Board then discusses the project recommendations with the planning Approval Board and finalizes the list of projects. The Approval Board consists of four MDT staff members:

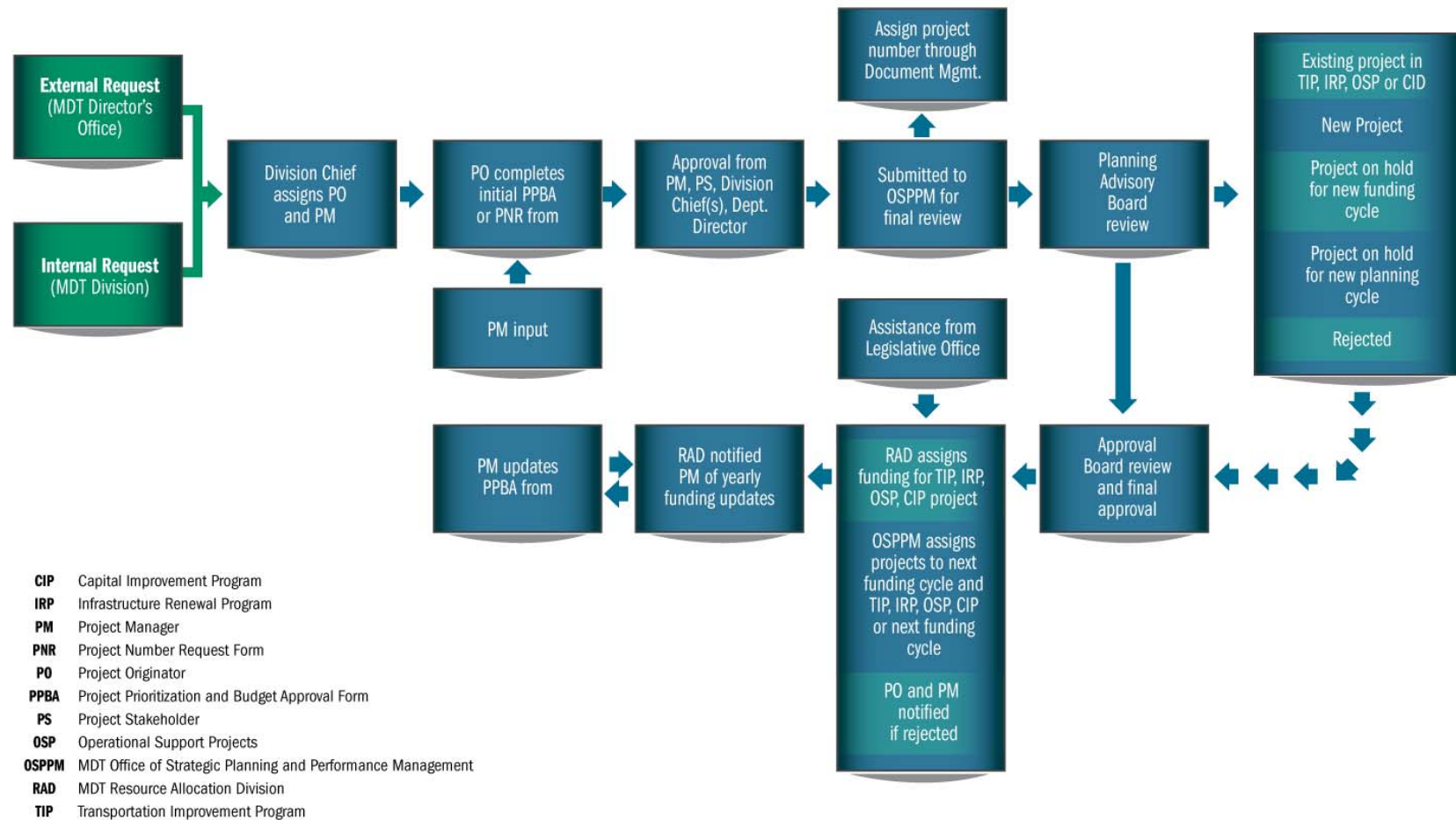
- MDT Director
- Deputy Director, Operations
- Assistant Director, Engineering, Planning and Development
- Assistant Director, Finance

If the project is approved for state and/or federal funding, the PPBA form is forwarded to the MDT Resource Allocation Division and/or Legislative Office for action. If the project is approved but to be re-evaluated the next planning cycle, the PPBA form is returned to the OSPPM, to be placed on the on-hold list of projects for the next planning cycle.

If there becomes a need to re-program capital project funds, the MDT Director must approve any re-programming through a separate PPBA form. In deciding which projects are candidates for re-programming, the MDT Resource Allocation Division will evaluate encumbered funds for candidate projects, and present the projects to the Planning Advisory Board and Approval Board for final consideration.

The projects identified for the FY 2009 – 2010 for budget approval are presented in Table 9-5. A brief description is included to provide an overview of the type of project improvement being proposed.

**Figure 9-1: Infrastructure Renewal Program Prioritization Process**



**Table 9-5: FY 2009 – 2010 Prioritized New IRP Projects for Budget Approval (2009\$)**

Classification	Project Name	Estimate Total Project Cost FY 09-10	Total Project Amount	Total funding Allocated	Type of Grant	2009	2010	2011
Safety & Security	Parking Garages - Fire Suppression	\$ 975,000	\$ 975,000	\$1,249,820 earmarked FY'10	5309 formula	\$ -	\$ 975,000	\$ -
Maintenance Facilities	40 Year Building Re-Certification 3311 NW 31 St.	\$ 159,923	\$ 228,558	\$210,000 earmarked FY'10	5309 Formula	\$ 18,000	\$ 159,923	\$ -
Maintenance Facilities	Coral Way Garage Hurricane Panels	\$ 100,000	\$ 100,000	\$100,000 earmarked FY'10	5309 Formula	\$ 100,000	\$ -	\$ -
Systems	Bus Garages Plumbing			\$300,000 earmarked FY'10	5309 Formula	\$ -	\$ 300,000	\$ -
Passenger Facilities	Concrete Repairs at Omni Bus Terminal	\$ 198,786	\$ 809,047	\$810,000 earmarked FY '10	5309 Formula	\$ -	\$ 198,786	\$ 610,261
Maintenance Facilities	Metrobus: A/C Replacement, and A/C & Chiller Unit Replacement	\$ 293,100	\$ 1,590,410	\$300,000 earmarked FY'10	5309 Formula	\$ 293,100	\$ 245,700	\$ 178,450
Maintenance Facilities	Bus Garages: Roofs	\$ 297,320	\$ 2,879,193	\$300,000 earmarked FY'10	5309 Formula	\$ -	\$ 297,320	\$ -
Passenger Facilities	Concrete Repairs and Asphalt repaving at Hialeah Station and Parking Lot	\$ 286,125	\$ 286,125	\$330,000 earmarked FY'10	5309 Formula	\$ -	\$ 286,125	\$ -
Maintenance Facilities	Secondary Guide Rails for Bus Washes	\$ 90,000	\$ 90,000	\$90,000 earmarked FY' 10		\$ -	\$ 90,000	\$ -
Maintenance Facilities	Replace air compressors at all bus locations	\$ 380,546	\$ 1,170,180	\$400,000 earmarked FY' 10	5309	\$ -	380,456,25	\$ 417,459
Systems	Tools and Equipment	\$ 298,000		\$298,000 FY '10	5309 Fixed Guideway	\$ -	\$ 298,000	\$ -
<b>TOTALS:</b>						<b>\$ 411,100</b>	<b>\$ 2,850,854</b>	<b>\$ 1,206,170</b>

## **9.7.2 Maintenance Facilities – Committed Projects**

### **40 Year Building Recertification**

A 40 year building recertification is required at the Central Bus Facility as per Miami-Dade County Code Compliance and an estimated \$230,000 is needed to complete necessary building repairs. The project budget includes design, inspections, construction administration and County administration.

### **Coral Way Garage Hurricane Panels**

Miami-Dade Transit has committed to furnish and install a total of 58 perforated stainless steel hurricane barriers and five foot (5') high performance accordion shutters at the Coral Way Bus Transportation and Maintenance Facilities and other buildings in the property. The estimated project cost is \$100,000.

### **Metrobus: Air Conditioning (A/C) Replacement, and A/C & Chiller Unit Replacement**

The installation of eight (8) rooftop A/C units and replacement of roof curbs at the Coral Way facility is proposed. MDT has also proposed to furnish and install nine (9) roof top A/C units and replace roof curbs at the Coral Way Bus Garage and Offices. An estimated \$293,000 is funded for this project.

### **Bus Garages: Roofs**

Miami-Dade Transit will furnish and install new roofing at the Central Bus Garage and Offices. The A/C and fan roof curbs are set to be resealed and insulated during this project. In addition, some roof ventilators and curbs may be replaced as necessary. This project has been funded for \$300,000.

### **Secondary Guide Rails for Bus Washes**

The installation of secondary guide rails in the bus washers is needed at the Central, Northeast and Coral Way Bus Facilities at an estimated cost of \$90,000. The secondary guide rail is necessary to protect wash system components at the Central, Northeast, and Coral Way Facilities.

### **Replace Air Compressors at All Bus Locations**

The replacement of air compressors at all MDT Bus Garages is proposed at an estimated project cost of \$381,000. The replacement project includes the purchase and installation of new air compressor, air dryers, receiver tanks, and piping. Current air compressors are beyond the equipment useful life and replacement is necessary to prevent total failure.

### **Concrete Repairs at Omni Bus Terminal**

Concrete repairs have been committed for the Omni Bus Terminal at an estimated cost of \$199,000. The concrete pavement surrounding catch basins located along the center line of the road at the facility are sinking. An evaluation of sinking pavement as a result of soil conditions and/or heavy bus traffic must also be completed. The

existing conditions at the terminal require a field engineering evaluation, set of drawings and technical specifications in order to complete this project.

### **Concrete Repairs and Asphalt Repaving at Hialeah Station and Parking Lot**

Concrete repair and asphalt repaving is proposed for the Hialeah Station and parking lot. The station parking lot has undergone severe asphalt damage as a result of tree root overgrowth in the lot. MDT proposes a full rehabilitation of the parking lot to include repair and renovation. The project is estimated to cost \$286,000.

## **9.7.3 Systems – Committed Projects**

### **Bus Garages Plumbing**

The overhaul of existing plumbing of MDT restroom facilities at the following locations have been approved for reconstruction: Central Bus Facilities Procurement Office, Materials Management, Facilities, Fuel Island, and the Warranty Administration Office. Approximately \$300,000 has been funded to complete this project.

### **Tools and Equipment/Replacement**

The Metromover system has been prioritized for tool and equipment replacement used for Metromover related repairs. The estimated cost for this project is \$298,000.

## **9.7.4 Safety and Security – Committed Projects**

### **Parking Garages - Fire Suppression**

An upgrade and replacement of fire suppression systems at six (6) original parking garages built with the Metrorail System is proposed. The parking garages include the Okeechobee, Dadeland South, Earlington Heights, Santa Clara, South Miami, and Dadeland North stations. The upgrade and replacement of fire suppression systems consist of the following parts: piping, sprinkler heads, jockey and fire pumps, and flow and tamper switches at an estimated cost of \$975,000.



## 9.8 2019 Recommended Service Plan

A Recommended Service Plan (RSP) has been developed for the TDP Major Update and serves as the needs plan for the MDT system. The 2019 RSP has been updated from the previous RSP that was listed in the 2008 MDT TDP Update. The improvements and adjustments provided within the RSP are proposed to occur within the planning horizon of the FY 2010-2019 TDP Major Update. Any future project recommended in this section for implementation is contingent upon Miami-Dade County receiving the appropriate federal, state and local funding for its implementation.

Some of the improvements and adjustments reflected in the 2019 RSP are identified under the PTP one-half percent sales surtax approved by voters on November 5, 2002. Most of the improvements listed in the RSP beyond 2010 were not included in the original PTP improvements list, but may be funded with future PTP surtax funds. These improvements were deemed to be the most pressing or requested by the community after the original PTP list was completed. This section addresses the four modes of transit as operated by MDT to include Metrobus, Metrorail, Metromover and Special Transportation Services (STS).

### 9.8.1 Recommended Service Plan – Metrobus

A RSP for FY 2010- 2019 is presented on the following pages to include system needs according to existing Metrobus routes as well as identified new bus service to include additional operational improvements within existing corridors that warrant more services as a result of increasing passenger travel demands. Clearly, MDT is committed to provide the level of transit service that will provide efficient services to passengers throughout the Miami-Dade County service area. This provision of service is continuously considered while MDT seeks to properly address critical issues of generating revenue, managing operational budgets, and prioritizing capital expansion programs.

Since the TDP Major Update comprises part of MDT's operational foundation for the future, it is imperative that the importance of "rightsizing" the RSP cannot be over emphasized. Therefore, this portion of the TDP Major Update details the both improvements and adjustments to achieve MDT's long term objectives.

#### 2019 Recommended Service Plan – Existing Transit Routes

The following table provides a description of the needed bus service improvements for existing transit routes. This table includes a summarized description of bus service improvements, annual operating cost per improvement, impact of additional buses on the peak vehicle requirements (PVR); programming of transit improvements by fiscal years; and corresponding funding needs by fiscal year.

The system needs that are proposed throughout the FY 2010 – 2019 RSP include an estimated total cost for all improvements to existing transit service over this ten year planning horizon. The estimated total cost for the improvements included in the following table is \$38.8 million. These adjustments to existing transit routes began with a base amount of 30.5 million annual miles, similar to what existed in June 2009.



**Table 9-6: 2019 Recommended Service Plan Summary for Existing Transit Bus Routes (2009\$)**

Route	Change Description	2010		2011		2012		2013		2014		2015		2016		2017		2018		2019	
		Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR
A	No planned improvements.																				
B	No planned improvements.																				
C	No planned improvements.																				
E	No planned improvements.																				
G	No planned improvements.																				
H	No planned improvements.																				
J	No planned improvements.																				
L	No planned improvements.																				
M	No planned improvements.																				
S	No planned improvements.																				
1	No planned improvements.																				
2	Re-align northern terminus to future Golden Glades Intermodal Terminal.			\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0
3	No planned improvements.																				
6	Extend route to serve the Miami Intermodal Center.					\$221,623	0	\$221,623	0	\$221,623	0	\$221,623	0	\$221,623	0	\$221,623	0	\$221,623	0	\$221,623	0
7	No planned improvements.																				
8	Extend service westward to SW 149 Avenue every 30 minutes and add weekend service to branch.			\$886,539	1	\$886,539	1	\$886,539	1	\$886,539	1	\$886,539	1	\$886,539	1	\$886,539	1	\$886,539	1	\$886,539	1
9	No planned improvements.																				
10	No planned improvements.																				
11	No planned improvements.																				
12	Remove Civic Center loop; alignment will stay on NW 12 Ave. City of Miami to implement Health District Circulator.			-\$173,190		-\$173,190		-\$173,190		-\$173,190		-\$173,190		-\$173,190		-\$173,190		-\$173,190		-\$173,190	
16	No planned improvements.																				
17	No planned improvements.																				

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**Table 9-6: 2019 Recommended Service Plan Summary for Existing Transit Bus Routes (2009\$) (continued)**

Route	Change Description	2010		2011		2012		2013		2014		2015		2016		2017		2018		2019	
		Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR
21	Discontinue 79 St. to 167 St. segment. Duplicates routes 27 & 97.	-\$373,413	-1	-\$373,413	-1	-\$373,413	-1	-\$373,413	-1	-\$373,413	-1	-\$373,413	-1	-\$373,413	-1	-\$373,413	-1	-\$373,413	-1	-\$373,413	-1
22	No planned improvements.																				
24	Provide limited-stop service east of Ponce de Leon Boulevard.			\$600,000	-2	\$600,000	-2	\$600,000	-2	\$600,000	-2	\$600,000	-2	\$600,000	-2	\$600,000	-2	\$600,000	-2	\$600,000	-2
27	No planned improvements.																				
28	No planned improvements.																				
29	No planned improvements.																				
31 (Busway Local)	Improve peak headway from 15 to 12 minutes.	\$401,562	2	\$401,562	2	\$401,562	2	\$401,562	2	\$401,562	2	\$401,562	2	\$401,562	2	\$401,562	2	\$401,562	2	\$401,562	2
31 (Busway Local)	Extend service to Florida City/Homestead along South Miami-Dade Busway Extension.	\$2,411,848	5	\$2,411,848	5	\$2,411,848	5	\$2,411,848	5	\$2,411,848	5	\$2,411,848	5	\$2,411,848	5	\$2,411,848	5	\$2,411,848	5	\$2,411,848	5
32	No planned improvements.																				
33	Improve peak headway from 30 to 20 minutes.															\$395,453	3	\$395,453	3	\$395,453	3
34 (Busway Flyer)	No planned improvements.																				
35	Improve peak headway from 30 to 20 minutes.			\$642,620	4	\$642,620	4	\$642,620	4	\$642,620	4	\$642,620	4	\$642,620	4	\$642,620	4	\$642,620	4	\$642,620	4
36	No planned improvements.																				
37	Realign route to serve the Miami Intermodal Center.					\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0
38 (Busway MAX)	Improve peak headway from 12 to 10 minutes.	\$255,396	1	\$255,396	1	\$255,396	1	\$255,396	1	\$255,396	1	\$255,396	1	\$255,396	1	\$255,396	1	\$255,396	1	\$255,396	1
40	No planned improvements.																				
42	Realign route to serve the Miami Intermodal Center.					\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0
46 (Liberty City Connection)	No planned improvements.																				
48	No planned improvements.																				
51 (Flagler MAX)	Route to be transformed to Flagler Rapid Bus (see New Routes table).			\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0
52	No planned improvements.																				

**Table 9-6: 2019 Recommended Service Plan Summary for Existing Transit Bus Routes (2009\$) (continued)**

Route	Change Description	2010		2011		2012		2013		2014		2015		2016		2017		2018		2019	
		Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR
54	No planned improvements.																				
56	No planned improvements.																				
57	Realign route to serve the Miami Intermodal Center.					\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0
62	No planned improvements.																				
70	No planned improvements.																				
71	No planned improvements.																				
72	Extend route westward to future West Kendall Terminal.							\$207,000	1	\$207,000	1	\$207,000	1	\$207,000	1	\$207,000	1	\$207,000	1	\$207,000	1
73	No planned improvements.																				
75	No planned improvements.																				
77	No planned improvements.																				
79 (79 Street MAX)	No planned improvements.																				
87	No planned improvements.																				
88	Straighten route and extend westward to the West Kendall Terminal, eliminate the 142 Avenue branch.							\$233,477	1	\$233,477	1	\$233,477	1	\$233,477	1	\$233,477	1	\$233,477	1	\$233,477	1
93 (Biscayne MAX)	Route to be transformed to Biscayne Rapid Bus (see New Routes table).			\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0
95X	Increase the number of trips to downtown and Civic Center by 10%.	\$192,780	0	\$192,780	0	\$192,780	0	\$192,780	0	\$192,780	0	\$192,780	0	\$192,780	0	\$192,780	0	\$192,780	0	\$192,780	0
95X	Introduce weekend service.					\$217,000	0	\$217,000	0	\$217,000	0	\$217,000	0	\$217,000	0	\$217,000	0	\$217,000	0	\$217,000	0
97 (27 Avenue MAX)	Route to be transformed to 27 Avenue Rapid Bus (see New Routes table).			\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0
99	No planned improvements.																				

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**Table 9-6: 2019 Recommended Service Plan Summary for Existing Transit Bus Routes (2009\$) (continued)**

Route	Change Description	2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		Cost Factors		
		Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Rev Hrs	Rev Miles	Estimated Op. Costs
104	Realign route westward to future West Kendall Terminal.							\$83,629	0	\$83,629	0	\$83,629	0	\$83,629	0	\$83,629	0	\$83,629	0	\$83,629	0	760	10,868	\$83,629
120 (Beach MAX)	No planned improvements.																							
123 (South Beach Local)	No planned improvements.																							
132 (Tri-Rail Doral Shuttle)	No planned improvements.																							
133 (Tri-Rail Airport Shuttle)	No planned improvements.																							
136	No planned improvements.																							
137 (West Dade Connection)	No planned improvements.																					2,550	41,565	\$418,404
204 (Killian KAT)	Realign route to the future West Kendall Bus Terminal.							\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0			
207/208 (Little Havana Circulator)	No planned improvements.																							
211 (Overtown Circulator)	No planned improvements.																							
238 (East-West Connection)	Extend westward to Beacon Lakes.							\$250,000	1	\$250,000	1	\$250,000	1	\$250,000	1	\$250,000	1	\$250,000	1	\$250,000	1			
243 (Seaport Connection)	No planned improvements.																							
246 (Night Owl)	No planned improvements.																							

**Table 9-6: 2019 Recommended Service Plan Summary for Existing Transit Bus Routes (2009\$) (continued)**

Route	Change Description	2010		2011		2012		2013		2014		2015		2016		2017		2018		2019	
		Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR
248 (Brickell Key Shuttle)	No planned improvements.																				
249 (Coconut Grove Circulator)	No planned improvements.																				
252 (Coral Reef MAX)	Operate later evening service into the Metrozoo Entertainment complex.																	\$81,004	1	\$81,004	1
254 (Brownsville Circulator)	No planned improvements.																				
272 (Sunset KAT)	Realign route to the future West Kendall Bus Terminal.							\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0
277 (7 Avenue MAX)	No planned improvements.																				
287 (Saga Bay MAX)	Improve peak headway from 30 to 20 minutes.							\$153,213	1	\$153,213	1	\$153,213	1	\$153,213	1	\$153,213	1	\$153,213	1	\$153,213	1
288 (Kendall KAT)	Realign route to the future West Kendall Bus Terminal.							\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0
288 (Kendall KAT)	Route to be transformed to Kendall Enhanced Bus project (see New Routes table).	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0
344	No planned improvements.																				
500 (Midnight Owl)	No planned improvements.																				

<b>INCREMENTAL TOTALS</b>	\$2,888,173	7	\$4,844,142	3	\$5,282,765	0	\$6,210,084	4	\$6,210,084	0	\$6,210,084	0	\$6,210,084	0	\$6,605,537	3	\$6,686,541	1	\$6,686,541	0
(MINI-BUSES)		0		0		0		0		0		0		0		0		0		0
(FULL SIZE BUSES)		7		3		0		4		0		0		0		3		1		0

<b>CUMULATIVE TOTALS</b>	\$2,888,173	7	\$7,732,315	10	\$13,015,080	10	\$19,225,164	14	\$25,435,248	14	\$31,645,332	14	\$37,855,416	14	\$44,460,953	17	\$51,147,494	18	\$57,834,035	18
(MINI-BUSES)		0		0		0		0		0		0		0		0		0		0
(FULL SIZE BUSES)		7		10		10		14		14		14		14		17		18		18

### **9.8.2 Transit Hubs and Feeder Routes for Existing Routes**

The improvements to the existing transit routes also include the development of a regional transit hub system. The current bus system generally operates on a modified grid pattern to provide feeder services to Metrorail and Metromover stations.

The 2019 RSP provides a modified grid bus system. Under the modified grid, bus routes will continue to serve their respective corridors and Metrorail stations, but will also provide connections to various routes within the general service area at a single location or transit hub. Ten transit hubs are proposed throughout Miami-Dade County. Passenger amenities will be afforded at these locations such as the ability to for transit riders to purchases transit passes, obtain transit schedule information, benches, shelters with weather protection etc. Some of these proposed transit hubs already serve these functions (i.e., Dadeland stations) while other hubs continue to remain in the conceptual planning phase.

Table 9-7 provides a list of the transit hubs with corresponding route connections planned to serve them. These hubs are also illustrated in Figure 9-2. In addition to those listed in this table there are many other areas that serve as transit hubs, for example, Golden Glades, Aventura Mall, Douglas Road Metrorail Station and other Metrorail stations, and the Omni. In addition, the City of Miami Beach has funding for a transit hub at 72nd Street and Collins/Harding Avenue.

Table 9-7: Transit Hub Locations and Feeder Routes for Existing Bus Routes

	ROUTES																				
TERMINALS	A	B	C	E	G	H	J	K	L	M	R	S	T	1	2	3	6	7	8	9	10
Flagler Marketplace																					
Dadeland Stations																					
Miami Beach - Lincoln/Washington																					
West Kendall																					
Northeast																					
Miami Intermodal Center																					
West Dade																					

	ROUTES																			
TERMINALS	11	12	16	17	21	22	24	27	28	29	31*	32	33	34*	35	36	37	38*	40	42
Flagler Marketplace																				
Dadeland Stations																				
Miami Beach - Lincoln/Washington																				
West Kendall																				
Northeast																				
Miami Intermodal Center																				
West Dade																				

**Table 9-7: Transit Hub Locations and Feeder Routes for Existing Bus Routes (continued)**

	ROUTES																				
TERMINALS	46*	48	51*	52	54	56	57	62	65	70	71	72	73	75	77	83	87	88	91	93*	95X
Flagler Marketplace																					
Dadeland Stations																					
Miami Beach - Lincoln/Washington																					
West Kendall																					
Northeast																					
Miami Intermodal Center																					
West Dade																					

	ROUTES																
TERMINALS	97*	99	104	120*	123*	132*	133*	136	137*	204*	207*	211*	238*	243*	246*	248*	249*
Flagler Marketplace																	
Dadeland Stations																	
Miami Beach - Lincoln/Washington																	
West Kendall																	
Northeast																	
Miami Intermodal Center																	
West Dade																	



**Table 9-7: Transit Hub Locations and Feeder Routes for Existing Bus Routes (continued)**

TERMINALS	ROUTES							
	252*	254*	272*	277*	287*	288*	344	500*
Flagler Marketplace								
Dadeland Stations								
Miami Beach - Lincoln/Washington								
West Kendall								
Northeast								
Miami Intermodal Center								
West Dade								

Source: Miami-Dade Transit, 2009

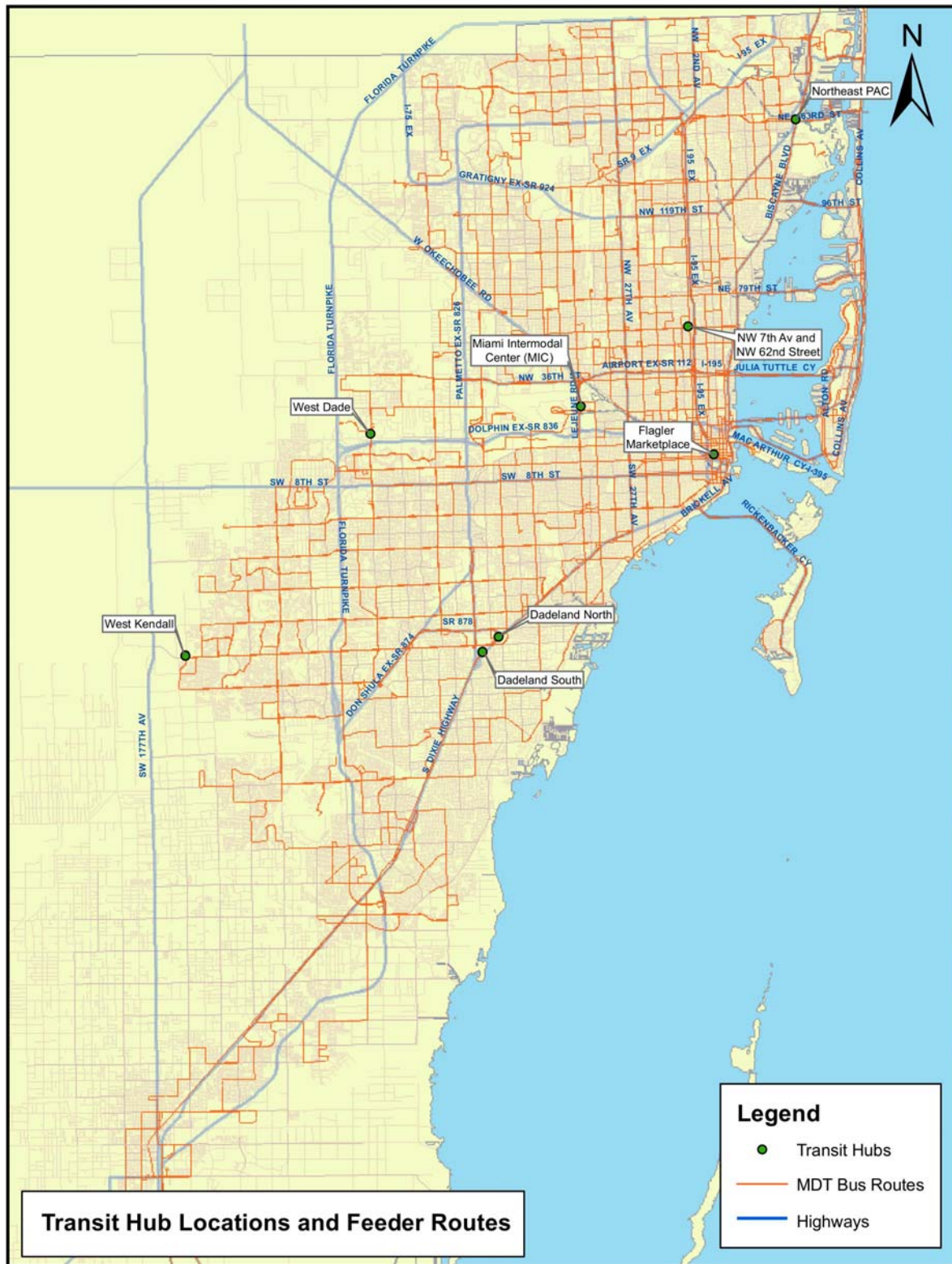
#### \* Route Descriptions

Route 31: Busway Local  
Route 34: Busway Flyer  
Route 38: Busway MAX  
Route 46: Liberty City Connection  
Route 51: Flagler MAX  
Route 93: Biscayne MAX  
Route 97: 27th Avenue MAX  
Route 123: South Beach Local  
Route 132: Tri-Rail Doral Shuttle  
Route 133: Tri-Rail Airport Shuttle  
Route 137: West Dade Connection  
Route 120: Beach MAX

Route 204 Killian KAT  
Route 207/208: Little Havana Circulator  
Route 211: Overtown Circulator  
Route 238: East West Connection  
Route 243: Seaport Connection  
Route 246: Night Owl  
Route 248: Brickell Key Shuttle  
Route 249: Coconut Grove Circulator  
Route 252: Coral Reef MAX  
Route 254: Brownsville Circulator  
Route 272: Sunset KAT  
Route 277: 7 Avenue MAX

Route 287: Saga Bay MAX  
Route 288: Kendall KAT  
Route 500: Midnight Owl

Figure 9-2: Transit Hub Locations and Feeder Routes



### **9.8.3 2019 Recommended Service Plan – New Transit Routes**

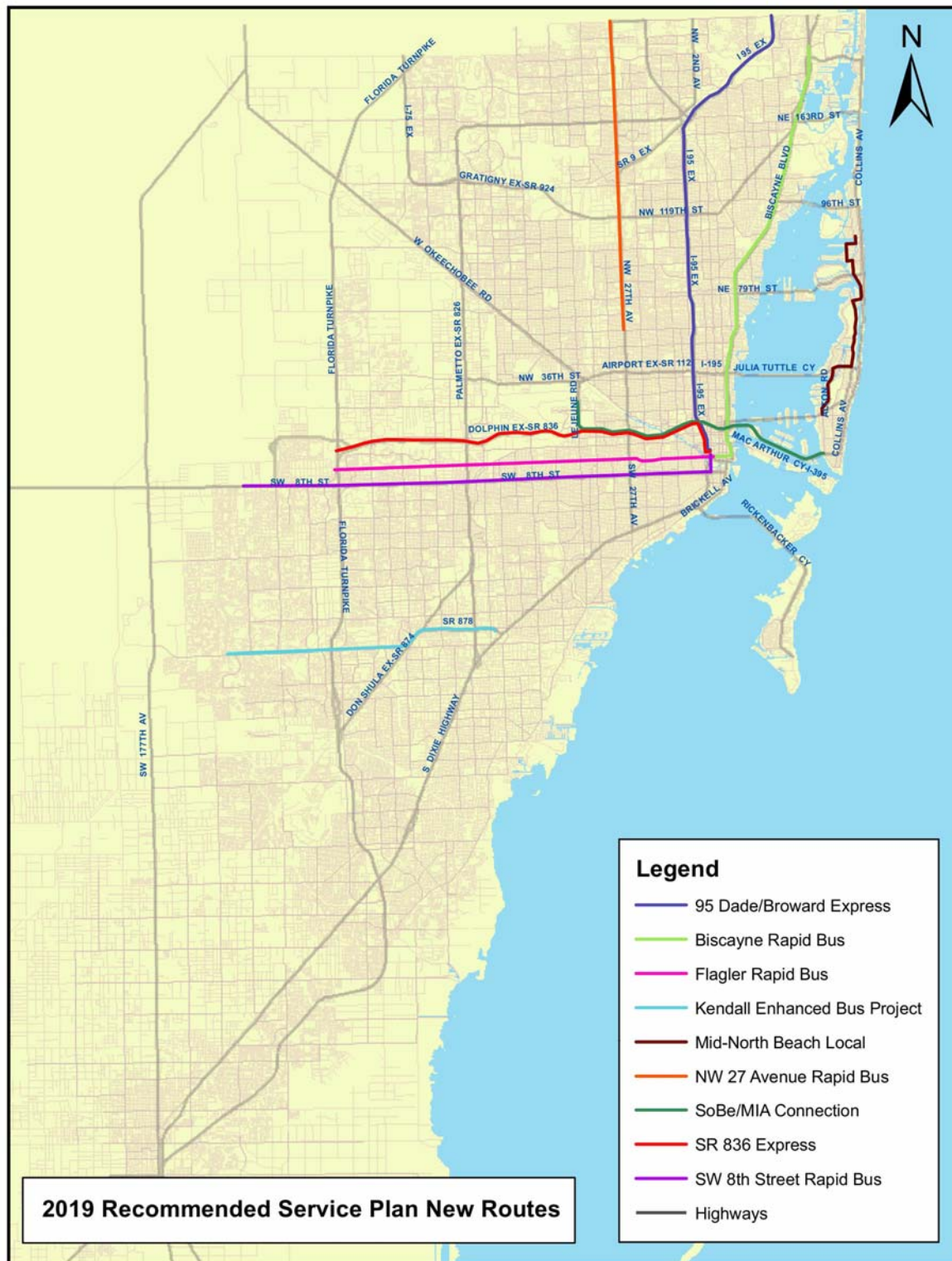
A summary of the nine (9) new transit routes that are proposed under the 2019 RSP are provided in Table 9-8. Five of these routes would replace old existing routes as identified in the table. The table also includes data on the proposed service levels, number of peak vehicle requirement (buses) needed to operate the service, annual operating costs, along with the time frame for implementation. The preliminary programming of these routes was conducted in a systematic and regional approach based on coordination with major transit capital projects. These new routes also respond to citizen's request for new service throughout the County and increase the number of routes operated by MDT from 88 to 92 bus routes. Table 9-9 provides the additional services planned for the identified transit hub locations by these new routes.

The following paragraph describes the routes listed in Table 9-8 Recommended New Routes Description that are not funded or partially funded. These routes are also illustrated in the following figure.

- 95 Express: FDOT operating funds of \$1,090,000 are provided for this route in FY 2009 (for the Urban Partnership FTA-funded bus purchases) and future year operational support is expected to continue at 100% from toll revenue. This route is also receiving \$13.8 million from FTA grant to purchase 16 60-foot hybrid buses to run on that route. Service is expected to begin January, 2010.
- Biscayne Rapid Bus: No operating funds currently available.
- Flagler Rapid Bus: Currently receiving FDOT funds through 2013.
- Kendall Enhanced Bus Service: FDOT funds of \$1,255,000 were awarded for this route in June 2008 to begin service in September 2010.
- Mid-North Beach Local: No funds currently available.
- South Beach/MIA: Will be funded through a Job Access and Reverse Commuting grant. Implementation planned for December 2009.
- State Road 836 Express: No funds available to-date
- SW 8 Street Rapid Bus: No funds currently available.

With rare exceptions, the only projects funded by FDOT that do not require a 50 percent (50%) or any operational match are the Transit Urban Corridor routes (Flagler MAX and the Busway routes).

Figure 9-3: 2019 Recommended Service Plan New Bus Routes





**Table 9-8: 2019 Recommended Service Plan New Routes Description (2009\$)**

New Route	Description	Headways			2010		2011		2012		2013		2014		2015		2016		2017		2018		2019	
		Peak	Mid Day	Week End	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR
95 Dade/ Broward Express	Express route from downtown Miami to Broward Boulevard and Sheridan Street. Headways of 15 minutes each. 100% funding by FDOT.	15	N/S	N/S	\$2,200,000	13	\$2,200,000	13	\$2,200,000	13	\$2,200,000	13	\$2,200,000	13	\$2,200,000	13	\$2,200,000	13	\$2,200,000	13	\$2,200,000	13	\$2,200,000	13
Biscayne Rapid Bus (old Route 93)	This route would provide limited-stop service along Biscayne Boulevard between Aventura and Downtown Miami, and would be created by adjusting the Biscayne MAX.	18	18	N/S			\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0
Flagler Rapid Bus (old Route 51)	This route would provide limited-stop service along Flagler Street between west Miami-Dade County and Downtown Miami, and would be created by adjusting the Flagler MAX.	15	15	N/S			\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0	0
Kendall Enhanced Bus project (old Route 288)	This route would provide limited-stop service along Kendall Drive between west Kendall and the Dadeland North Metrorail station, and would be created by adjusting the Kendall KAT.	10	15	N/S	\$2,510,000	8	\$2,510,000	8	\$2,510,000	8	\$2,510,000	8	\$2,510,000	8	\$2,510,000	8	\$2,510,000	8	\$2,510,000	8	\$2,510,000	8	\$2,510,000	8
Mid-North Beach Local	This route would provide circulator type service between 17th Street and 88th Street in Miami Beach serving Hawthorne Avenue, Pinetree Drive, and Alton Road. Possibly funded by City of Miami Beach.						\$1,550,000	3	\$1,550,000	3	\$1,550,000	3	\$1,550,000	3	\$1,550,000	3	\$1,550,000	3	\$1,550,000	3	\$1,550,000	3	\$1,550,000	3
NW 27 Avenue Rapid Bus (old route 97)	This route would provide limited-stop service along NW 27 Avenue between the Broward/Miami-Dade county line and the MLK Metrorail station.	6.5	10	N/S					\$3,100,000	9	\$3,100,000	9	\$3,100,000	9	\$3,100,000	9	\$3,100,000	9	\$3,100,000	9	\$3,100,000	9	\$3,100,000	9
SoBe/MIA Connection	New premium service between South Beach and the Miami International Airport.	30	30	30	\$1,230,000	5	\$1,230,000	5	\$1,230,000	5	\$1,230,000	5	\$1,230,000	5	\$1,230,000	5	\$1,230,000	5	\$1,230,000	5	\$1,230,000	5	\$1,230,000	5

Ten Year Implementation Plan

**Table 9-8: 2019 Recommended Service Plan New Routes Description (2009\$)(continued)**

New Route	Description	Headways			2010		2011		2012		2013		2014		2015		2016		2017		2018		2019	
		Peak	Mid Day	Week End	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR
SR 836 Express	This route would provide limited-stop service between west Miami-Dade County and the MIC and/or downtown Miami via the Dolphin Expressway (SR836) during the morning and afternoon peak periods only every 15 minutes. To be operated as one of the special use lanes project routes. Possibly funded by FDOT.	15	N/S	N/S	\$1,640,000	7	\$1,640,000	7	\$1,640,000	7	\$1,640,000	7	\$1,640,000	7	\$1,640,000	7	\$1,640,000	7	\$1,640,000	7	\$1,640,000	7	\$1,640,000	7
SW 8 Street Rapid Bus	This route would provide limited-stop service along SW 8 Street between west Miami-Dade (approximately SW 147 Avenue) and downtown Miami.	6.5	10	N/S							\$3,482,000	8	\$3,482,000	8	\$3,482,000	8	\$3,482,000	8	\$3,482,000	8	\$3,482,000	8	\$3,482,000	8
<b>INCREMENTAL TOTALS</b>					\$7,580,000	33	\$9,130,000	3	\$12,230,000	9	\$15,712,000	8	\$15,712,000	0	\$15,712,000	0	\$15,712,000	0	\$15,712,000	0	\$15,712,000	0	\$15,712,000	0
(MINI-BUSES)						0		0		0		0		0		0		0		0		0		0
(FULL SIZE BUSES)						33		3		9		8		0		0		0		0		0		0
<b>CUMULATIVE TOTALS</b>					\$7,580,000	33	\$16,710,000	36	\$28,940,000	45	\$44,652,000	53	\$60,364,000	53	\$76,076,000	53	\$91,788,000	53	\$107,500,000	53	\$123,212,000	53	\$138,924,000	53
(MINI-BUSES)						0		0		0		0		0		0		0		0		0		0
(FULL SIZE BUSES)						33		36		45		53		53		53		53		53		53		53

**Table 9-9: Transit Hub Locations and Feeder Routes for New Routes**

TERMINALS	ROUTES								
	79 Street MAX	95 Dade/Broward Express	Beach MAX	Biscayne BRT	Civic Center Circulator	Flagler BRT	Kendall BRT	SoBe/MIA Connection	SR 836 Express
Flagler Marketplace									
Dadeland Stations									
Miami Beach									
West Kendall									
Northeast									
Miami Intermodal Center									
West Dade									
NW 7th Avenue and 62nd Street									
Northeast PAC									
Homestead									

Source: Miami-Dade Transit, 2009

#### 9.8.4 Recommended Service Plan – Metrorail

The Metrorail expansion program continues to progress based upon the opening of the Palmetto Metrorail Station and the implementation of the Orange Line Phase 1. In 2003, MDT opened the new Palmetto Station in Medley which included 710 parking spaces. The Orange Line Phase 1: Earlington Heights-Miami Intermodal Center (MIC) Connector is the next segment of Metrorail that is now under construction. The Orange Line Phase 1: Earlington Heights-MIC Connector is approximately a 2.4-mile elevated heavy rail extension from the existing Earlington Heights Metrorail Station at NW 22nd Avenue and NW 41st Street to the MIC at the Miami International Airport. The service will operate on the new section of elevated tracks being constructed between the MIC and Earlington Heights and share the existing elevated tracks currently used for the Stage 1 line from Palmetto to Dadeland South station on Stage 1 (Figure 9-4).

**Figure 9-4: Earlington Heights – MIC Connector**

Source: Miami-Dade Transit, 2009

In FY 2012, construction is scheduled to be complete with the Earlington Heights-MIC Connector opening for passenger service. Once in service this Metrorail extension will provide a premium transit service connection to the MIC with a proposed 6.5-minute headway during the peak AM and PM travel times. The Earlington Heights-MIC Connector is will operate to provide direct service between the MIC and Dadeland stations. For those passengers boarding at the MIC a transfer will be required at the Earlington Heights station in order to reach the Palmetto station. The existing Stage 1 Metrorail will operate at 7.5 minute headways during the peak AM and PM travel times between the Palmetto station and Dadeland station. This new Metrorail service will also provide regional rail connection to the Miami International Airport via the MIA PeopleMover line that will provide service between the Airport and the MIC at 90-second headways (Figure 9-5). This service will be completed as a joint effort between Miami-Dade Expressway Authority and Miami-Dade Aviation Department.

Service improvements to the Metrorail System are linked to the expansion program and to the Metrorail Vehicle Replacement Program as previously discussed in the capital improvement plan committed section of this chapter.



**Figure 9-5: Proposed Operating Plan with MIC-Earlinton Heights Connector in Service**



### **9.8.5 Recommended Service Plan – Metromover**

No service improvements are committed for Metromover in the FY 2010-2019 RSP. There are no other planned extensions of the existing Metromover system. MDT is committed to continue improvement of service reliability during the 2009-2019 TDP period.

### **9.8.6 Special Transportation Services**

No significant changes are programmed as part of the FY 2010-2019 RSP. MDT is committed to continue improvement of service reliability during the TDP 2009-2019 period.

## **9.9 Capital Needs**

### **9.9.1 Transit Terminals**

As identified in the 2019 RSP, the modified grid system requires the development of transit hubs throughout the region of service. Table 9-10 lists the capital needs identified for transit hub locations along with their respective status and funding needs.

### **9.9.2 Bus Fleet Expansion**

All service improvements identified in the 2019 Recommended Service Plan (RSP) also reflected the peak vehicle requirements (PVR) impact of each improvement. The programming of services during the FY 2010 - 2019 period allows for the bus fleet requirements to be analyzed. A determination of bus fleet needs based on the 2019 RSP, which assumes a 20 percent (20%) spare ratio applied to the PVR. Based on the RSP, there will be no additional purchase needs of minibuses. However, 79 full size buses will be required for the expected improvements, including new route services.

**Table 9-10: 2019 Recommended Service Plan Transit Hub Needs**

<b>Transit Hubs</b>	<b>Status</b>	<b>Unfunded Needs</b>
<b>Flagler Marketplace</b>	The existing downtown Miami bus terminal site will be expanded one block to the north as part of the Flagler Street Marketplace project. Additional upgrades are needed to provide necessary passenger amenities. The 2019 RSP provides the need for added bus bays at this location.	\$3,185,000
<b>Dadeland Stations</b>	Both the Dadeland North and Dadeland South Metrorail stations provide a high degree of passenger amenities which in turn offer passengers efficient and convenient transfers. In addition to the kiosk placed at Dadeland South, the following is the cost for a similar kiosk at the Dadeland North station.	\$42,500
<b>West Kendall</b>	A West Kendall hub is sought to address regional service linkages and as a western terminus of the Kendall "Priority Transit" Corridor. Currently, private developers have included the construction of a transit terminal in their development proposal. This station will be constructed through private/public partnership.	Committed Improvement
<b>Northeast PAC</b>	This facility will be developed as an enhanced bus hub that would connect circulator, regional, and premium bus routes within the area. The transit hub would replace and/or supplement the existing bus terminal located in the vicinity of the Mall at 163 <sup>rd</sup> Street. There are currently (2009) fifteen bus routes that serve the area. It is planned that this facility will be part of a TOD for this area. MDT is seeking funding from state and federal sources to implement this terminal.	\$6,100,000
<b>Miami Intermodal Center (MIC)</b>	FDOT is managing this project. FDOT has over \$400 million programmed for the MIC distributed among 17 projects. These include the rental car HUB, the MIC Core Roadway and intersection improvements, transit connections to the terminal building, utilities relocation, etc. Phase I (MIC Core) includes the bus terminal facilities and infrastructure to coordinate with other modes.	Committed Improvement

**Table 9-10: 2019 Recommended Service Plan Transit Hub Needs (continued)**

<b>Transit Hubs</b>	<b>Status</b>	<b>Unfunded Needs</b>
<b>NW 7th Avenue and 62<sup>nd</sup> Street</b>	This facility will be developed as a multimodal Passenger Activity Center (PAC), and located on NW 7 <sup>th</sup> Avenue and NW 62 <sup>nd</sup> Street as proposed in the City of Miami's Transportation Corridor Study. This PAC will promote accessible public transportation and economic development throughout the City of Miami's Transportation Corridor (NW 7th Avenue between 54 Street and NW 95 Street) utilizing a "Transit Village Vision" concept. The center will provide much needed parking relief; promote the use of park-and-ride, and access to privately operated taxi and Jitney services.	\$10,300,000 are committed improvements for ROW and construction for parcels 1-6. Additional \$3.5M are needed.
<b>West Dade</b>	This facility is committed to be constructed by private developers. The location slated for the terminal is at NW 12 Street, west of NW 107th Avenue. The developer is building for MDT a park and ride garage with 260 spaces.	Committed Improvement

\* These figures represent preliminary conceptual costs estimates and the cost figures are in constant dollars.

### 9.9.3 Priority Transit Corridor Needs

Eleven priority transit corridors have been identified as unfunded needs. Each of these corridors currently have existing Metrobus service but due to growing travel demands, traffic congestion, and estimated population and land use changes warrant consideration for new capital investment. The types of capital investment include additional infrastructure that would allow bus service to improve travel time. This would include priority signalization, stylized stations with shelters, passenger information systems at station stops, as well as the implementation of a branded bus service that would include new transit vehicles.

The capital cost for the proposed priority transit corridors is based on estimates for the BRT "Lite" corridors (East-West and North). Conceptual engineering costs have been prepared for MDT on those two corridors in 2008 on a fully built up capital cost model including improvements to guideway, signal, intersections, and stations, and including factored costs for professional services and contingencies. The estimate for the East-West Corridor is at \$84.7 million, which includes \$21.8 million for vehicles. By subtracting the vehicle costs, the cost per mile for the 12.1 miles of operation on the East-West corridor calculates to an approximation of about \$5.2 million per mile. The estimate for the North Corridor is \$102.7 million, of which \$15.9 million for vehicles. Dividing the \$86.8 million for the non-vehicle portion of the North Corridor line by the 10.5 miles of the operation works out to an average of \$8.27 million per mile. Adding the non-vehicle costs for both lines together and dividing by the total number of miles of operation for both lines produces a weighted average cost per mile of about \$6.6 million per mile.

The following table presents the proposed priority corridors together with recommended timeframe for implementation as well as an opinion of the approximate costs for each corridor. As the differences between the estimated costs of the East-West and North corridors show, the differences in conditions between two corridors can produce significant differences even when the proposed improvements in the corridors are similar. Thus, additional planning and engineering analysis would be required to provide more precise cost estimates for each of the proposed corridors as presented.

**Table 9-11: Priority Transit Corridors**

Year of Implementation	Priority Transit Corridors	Type of Improvements	2009 Capital Cost (000's)
2011	US 1 (Biscayne Boulevard) from Downtown Miami to County line	Station upgrades, Queue jump lanes, traffic signal preference, off-bus fare collection system, passenger information systems	\$97,000
2012	NE 167th/163rd/Sunny Isles Boulevard from Golden Glades Tri-Rail Station to Collins Avenue		\$38,700
2013	NW 135th Street from NW 12th Avenue to US 1		\$24,200
2014	NW 36th Street/Julia Tuttle Causeway from Tri-Rail Hialeah Market Station to Collins Avenue		\$62,900
2015	West 12th Avenue from Okeechobee Metrorail Station to NW 186th Street		\$48,100
2016	SW 107th Avenue from SW 40th Street to NW 25th Street		\$29,400
2017	Flagler Street from SW 107th Avenue to Downtown		\$74,800
2018	SW 8th Street from SW 107th Avenue to Downtown		\$73,200
2018	SW 72nd Street from 117th Avenue to US 1/Busway		\$38,100
2019	Kendall Drive from 137th Avenue to US 1/Busway		\$44,600
2019	Coral Reef Drive from 137th Avenue to US 1/Busway		\$30,300
Total			\$561,300

#### **9.9.4 Infrastructure Renewal Program Needs**

The following table identifies a number of proposed projects that have been determined by MDT as necessary for the upkeep and maintenance of existing infrastructure to ensure the MDT transit system operates in a state of good repair. The infrastructure renewal program (IRP) includes planned investments in the following program areas:

- Information technology, including data center modernization, network upgrades, and improved accident/incident reporting;
- Passenger amenities, including escalator covers and improved signage;
- Passenger facilities, including escalator and elevator replacements, busway improvements, and platform refurbishments;
- Rolling stock, including bus maintenance component replacements (bus vehicle fleet replacement schedule is provided in the Appendix);
- Systems, including wayside overhauls, uninterrupted power supplies, AC unit substations, train control system replacement, traction power substations, and traction power cabling;
- Maintenance facilities, including bus garage lot resurfacing, emergency backup generators, and A/C replacement;
- Safety and security, including fire alarm replacement, railing replacements, and pedestrian safety improvements; and,
- Track and guideway, including guideway painting, frog replacement, and work vehicles.

These investments are critical to the continued safe and efficient operation of MDT's transit network. The proposed year of implementation is also presented for the FY 2010- 2019 planning horizon of the TDP Major Update (Table 9-12).

**Table 9-12: Proposed Infrastructure Renewal Program Needs (2019)**

Classification	Project Name	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total Estimated Cost YOE
<b>INFORMATION TECHNOLOGY</b>												
Information Technology	MDT CAD/AVL System Upgrade/Enhancements	\$ 2.60	\$ 6.20	\$ 3.37	-	-	-	-	-	-	-	\$ 12.17
Information Technology	Uninterrupted Power Supply for Network Equipment	-	\$ 0.44	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.08	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.10	\$ 0.67
Information Technology	Mobile Technology Tools & Bus Driver Training System -Vigil	\$ 0.04	\$ 0.04	\$ 0.05	\$ 0.05	\$ 0.05	\$ 0.05	\$ 0.05	\$ 0.05	\$ 0.05	\$ 0.05	\$ 0.46
Information Technology	Static Technology Tools	\$ 0.17	\$ 0.18	\$ 0.19	\$ 0.19	\$ 0.20	\$ 0.20	\$ 0.21	\$ 0.22	\$ 0.23	\$ 0.23	\$ 2.01
Information Technology	Server Plan Upgrade/Strategy	\$ 0.24	\$ 0.29	\$ 0.15	\$ 0.15	\$ 0.15	\$ 0.15	\$ 0.15	\$ 0.16	\$ 0.16	\$ 0.16	\$ 1.75
Information Technology	Multi-function Copier/Fax/Printer/Scanner Services	-	\$ 0.62	\$ 0.32	\$ 0.34	\$ 0.35	\$ 0.36	\$ 0.37	\$ 0.38	\$ 0.40	\$ 0.41	\$ 3.53
Information Technology	Data Center Modernization	-	-	-	-	-	-	-	\$ 0.33	-	-	\$ 0.33
Information Technology	MDT Network Upgrade/Enhancements	-	\$ 0.53	\$ 0.28	\$ 0.29	\$ 0.30	\$ 0.31	-	\$ 0.33	\$ 0.34	\$ 0.35	\$ 2.71
Information Technology	Data Warehouse	-	-	-	-	\$ 0.32	-	-	-	\$ 0.36	-	\$ 0.68
Information Technology	Voice / Data Communication	-	\$ 0.25	\$ 0.13	\$ 0.14	\$ 0.14	\$ 0.14	-	\$ 0.15	\$ 0.16	\$ 0.16	\$ 1.27
Information Technology	Bus Accidents and Incidents System Replacement	-	-	-	-	-	-	-	-	-	\$ 0.11	\$ 0.11
Information Technology	Electronic Kiosks	\$ 0.33	-	-	-	-	-	-	-	-	-	\$ 0.33
Information Technology	Bus Diagnostic Systems	-	-	-	-	-	-	-	-	\$ 0.08	-	\$ 0.08
Information Technology	Financial Systems Replacement	-	-	-	-	-	\$ 0.17	-	-	-	-	\$ 0.17
Information Technology	Personal / Payroll Systems Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 0.26	\$ -	\$ -	\$ -	\$ -	\$ 0.26
<b>PASSENGER AMENITIES</b>												
Passenger Amenities	Metromover Escalator Covers & Escalator Replacement and Government Center Canopy Extension	\$ 0.02	\$ 1.97	\$ 2.06	\$ 2.13	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6.17
Passenger Amenities	Map Cabinet Replacements	-	-	-	-	-	-	\$ 0.06	\$ 0.09	-	-	\$ 0.15
Passenger Amenities	Trailblazer (Wayfinding) Sign Replacements	-	-	-	-	-	-	\$ 0.06	\$ 0.03	-	-	\$ 0.09
Passenger Amenities	Corporate Identity Signage for Bus Terminals	-	-	-	-	-	-	\$ 0.04	-	-	-	\$ 0.04
Passenger Amenities	Map Cabinet Replacements	-	-	-	-	-	-	\$ 0.06	-	-	-	\$ 0.06
Passenger Amenities	Permanent Signage Replacements for "Overtown" Station	-	-	-	-	-	-	\$ 0.07	-	-	-	\$ 0.07



**Table 9-12: Proposed Infrastructure Renewal Program Needs (2019) (continued)**

Classification	Project Name	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total Estimated Cost YOE
<b>PASSENGER FACILITIES</b>												
Passenger Facilities	Escalators Replacement/Elevators Refurbishment	-	\$ 3.86	\$ 2.03	\$ 2.10	\$ 2.18	\$ 2.24	\$ 2.32	\$ 2.39	\$ 2.48	\$ 2.56	\$ 22.15
Passenger Facilities	Metrorail Piers & Guideway Coating	-	-				-	\$ 0.77	\$ 0.81	\$ 0.35	-	\$ 1.93
Passenger Facilities	SouthMiami-Dade Busway 1/4 Mile Radius ADA Improvements Between SW 200 & 88 Street (ADA Accessibility on the Busway).			\$ -	\$ -	\$ -	\$ -	\$ 0.30	\$ 1.87	\$ -	\$ -	\$ 2.17
Passenger Facilities	Request for Proposal (RFP) for Functional Assessment of STS Applicants	\$ 0.90	\$ 0.89	\$ 0.89	\$ 0.87	\$ 0.86	\$ 0.86	\$ 0.85	\$ 0.84	\$ 0.83	\$ 0.83	\$ 8.61
Passenger Facilities	Metromover Relamping - Stations	-	\$ 0.06	\$ 0.06	\$ 0.07	\$ 0.07	\$ 0.07	\$ 0.07	\$ 0.08	\$ 0.08	\$ 0.08	\$ 0.62
Passenger Facilities	Parking Garages Relamping (Induction)	-	\$ -	\$ -	\$ -			\$ 0.41	\$ 0.43	\$ 0.44	\$ 0.45	\$ 1.73
Passenger Facilities	Metrorail Relamping -Stations	-	\$ 0.09	\$ 0.09	\$ 0.10	\$ 0.10	\$ 0.11	\$ 0.11	\$ 0.11	\$ 0.11	\$ 0.12	\$ 0.93
Passenger Facilities	Replace Elevator Machine Room & Cab Ventilation	-	\$ 0.08	-	-	-	-	-	-	-	-	\$ 0.08
Passenger Facilities	Metrorail Station Refurbishment / Door Replacement at Metromover	-	\$ 0.84	\$ 0.87	\$ 0.84	\$ 0.93	\$ 0.96	\$ 0.99	\$ 1.03	\$ 1.06	\$ 1.10	\$ 8.61
Passenger Facilities	Signage Replacement Project at Metrorail/Metrobus Facilities	\$ 0.05	-	-	-	-	-	-	-	-	-	\$ 0.05
Passenger Facilities	Metromover Escalator Covers & Escalator Replacement	\$ 1.97	\$ 0.02	\$ 2.06	\$ 2.13	-	-	-	-	-	-	\$ 6.18
<b>ROLLING STOCK</b> (Note: IRP assumes, for buses, mid-life overhaul intervals only.)												
Rolling Stock	Phase 2 Vehicle Door System Facelift	-	-	-	-	-	-	-	-	-	1.06	\$ 1.06
Rolling Stock	Mover F & G Inspections	-	\$ 0.86	-	-	-	-	-	-	-	\$ 0.39	\$ 1.25
Rolling Stock	Phase 2 Vehicle HVAC Facelift	-	-	-	-	-	-	-	-	-	\$ 1.00	\$ 1.00
Rolling Stock	Bus Maintenance Component Replacement Plan	\$ 3.64	\$ 0.95	\$ 3.14	\$ 3.44	\$ 2.68	\$ 2.77	\$ 2.86	\$ 2.96	\$ 3.05	\$ 3.15	\$ 28.63
Rolling Stock	Rail HVAC Overhaul		-	-	-	-	\$ 0.41	-	-	-	-	\$ 0.41
Rolling Stock	Purchase of Service & Support Vehicles	-	-	-	-	-	-	-	\$ 0.88	-	-	\$ 0.88



**Table 9-12: Proposed Infrastructure Renewal Program Needs (2019) (continued)**

Classification	Project Name	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total Estimated Cost YOY
<b>SYSTEMS</b>												
Systems	Data Transmission System - Mover	-			-	-	\$ 4.16	-	-	-	-	\$ 4.16
Systems	Conduit Grounding Rebuild	-			-	-	\$ 1.94	\$ 0.97	-	-	-	\$ 2.90
Systems	Multi-Channel Voice Recorder	\$ 0.67	-	-	-	-	-	-	-	-	-	\$ 0.67
Systems	Uninterrupted Power Supplies - Mover	-			-	-	-	\$ 1.73	\$ 1.75	-	\$ 0.49	\$ 3.96
Systems	Wayside Overhaul	-			-	-	-	\$ 29.25	\$ 15.00	-	-	\$ 44.25
Systems	Switch Machine Cable- Mainline	-					-	\$ 0.88	\$ 0.91	\$ 0.88	\$ 0.89	\$ 3.55
Systems	Rebuild Switch Machines (M-3) - Mainline	-					-	\$ 0.40	\$ 0.21	\$ 0.21	-	\$ 0.82
Systems	Tools and Equipment	\$ 0.13		\$ 0.05	\$ 0.05	\$ 0.08	\$ 0.10	\$ 0.05	\$ 0.05	\$ 0.05	\$ 0.06	\$ 0.60
Systems	Bus Garages Plumbing				\$ 0.39	-	-	\$ 0.25	\$ 0.26	\$ 0.50	\$ 0.51	\$ 1.90
Systems	Local/Supervisor Control Panel Replacement	\$ 0.21		-	-	-	-	-	-	-	-	\$ 0.21
Systems	Train Control DC Power Source	\$ 0.61		-	-	-	-	-	-	-	-	\$ 0.61
Systems	Uninterrupted Power Supply - Government Center	\$ 0.20		-	-	-	-	-	\$ 0.08	-	-	\$ 0.29
Systems	CAD/AVL RF Vehicular Radio Replacement	-	-	-	-	-	-	-	-	\$ 4.65	-	\$ 4.65
Systems	Lehman and Mover Facility Plumbing	-	-	-	-	-	-	-	\$ 0.86	-	-	\$ 0.86
Systems	Replace Switch Machines - Yard	-	-	-	\$ 0.20	\$ 0.20	\$ 0.20	\$ 0.21	\$ 0.22	\$ 0.23	-	\$ 1.25
Systems	Vehicle ATC Modules	\$ 0.02		-	-	-	-	-	-	-	-	\$ 0.02
Systems	AC Unit Substations	-	-	-	-	-	\$ 2.94	\$ 2.96	\$ 3.02	\$ 3.02	\$ 3.16	\$ 15.09
Systems	Running Surface	-	-	-	-	-	-	-	-	-	\$ 3.01	\$ 3.01
Systems	Traction Power Substation - Palmetto Yard	-	-	-	-	-	\$ 1.23	\$ 1.22	-	-	-	\$ 2.45
Systems	AC Unit Substations - Palmetto Yard	-	-	-	-	-	\$ 1.09	\$ 1.10	-	-	-	\$ 2.18
Systems	Train Control Systems Replacement	-	-	-	-	-	-	-	\$ 14.33	\$ 13.70	\$ 12.86	\$ 40.89
Systems	Traction Power Substations	-	-	-	-	-	\$ 5.47	\$ 5.38	\$ 5.01	\$ 4.76	\$ 4.94	\$ 25.55
Systems	Switch Machine Cable - Yard	-	-	-	-	-	\$ 0.78	\$ 0.81	\$ 0.83	\$ 0.86	\$ 0.89	\$ 4.18
Systems	Switch Logic Cabinet Overhaul (Metromover)	\$ 2.21	-	-	-	-	-	-	-	-	-	\$ 2.21

**Table 9-12: Proposed Infrastructure Renewal Program Needs (2019) (continued)**

Classification	Project Name	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total Estimated Cost YOE
Systems	Replace Switch Machines - Mainline	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 0.45	\$ 0.46	\$ 0.47	\$ 0.42	\$ -	\$ 1.79
Systems	Traction Power Cabling	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3.68	\$ 3.80	\$ 4.12	\$ 4.06	\$ 4.19	\$ 19.85
Systems	Traction Power Gap Ties	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 0.92	\$ 0.90	\$ 0.93	\$ -	\$ -	\$ 2.75
Systems	Uninterrupted Power Supply - Mainline (Metrorail)	\$ -	\$ -	\$ -	\$ -	\$ 1.74	\$ 1.80	\$ -	\$ -	\$ -	\$ -	\$ 3.54
Systems	Traction Power Cable Requirement	\$ 1.28						\$ 1.24	\$ -	\$ -	\$ -	\$ 2.52
<b>MAINTENANCE FACILITIES</b>												
Maintenance Facilities	Lifts Replacement for Rail and Bus	\$ -						\$ 1.65	\$ -	\$ -	\$ -	\$ 1.65
Maintenance Facilities	Lehman Center Yard Tower Upgrade	\$ -						\$ 0.85	\$ 2.99	\$ 1.01	\$ -	\$ 4.84
Maintenance Facilities	Replace air compressors at all bus locations	\$ -						\$ 0.92	\$ 0.60	\$ -	\$ -	\$ 1.52
Maintenance Facilities	A/C & Chiller Unit Replacement	\$ -						\$ 2.42	\$ 0.14	\$ 0.14	\$ 0.14	\$ 2.84
Maintenance Facilities	Bus Garages: Roofs	\$ -							\$ 0.90	\$ 0.63	\$ 0.65	\$ 2.18
Maintenance Facilities	Metrobus: A/C Replacement	\$ 0.92		\$ -	\$ -	\$ -	\$ -	\$ 0.56	\$ -	\$ -	\$ -	\$ 1.49
Maintenance Facilities	Central O & I Garage Shop Floor Leveling	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 0.97	\$ -	\$ -	\$ -	\$ 0.97
Maintenance Facilities	Secondary Guide Rails for Bus Washes	\$ 0.07	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 0.07
Maintenance Facilities	ETS - Telephone Cable Replacement - Rail	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 0.44	\$ 0.23	\$ 0.24	\$ 0.25	\$ 1.16
Maintenance Facilities	Emergency Backup Generators	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1.94	\$ -	\$ -	\$ -	\$ 1.94
Maintenance Facilities	Flood mitigation at William Lehman Facility	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 0.06	\$ -	\$ -	\$ -	\$ 0.06
Maintenance Facilities	Tire Servicing Equipment Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 0.23	\$ -	\$ -	\$ -	\$ 0.23
Maintenance Facilities	Currency Counters	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 0.11	\$ 0.08	\$ -	\$ -	\$ -	\$ 0.19
Maintenance Facilities	Mover and Lehman Facility - Water Main	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 0.32	\$ -	\$ -	\$ -	\$ 0.32
Maintenance Facilities	Renovation of Drainfield	\$ -		\$ -	\$ -	\$ -	\$ -	\$ 0.15	\$ -	\$ -	\$ -	\$ 0.15
Maintenance Facilities	Bus Garages: Lot Resurfacing	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 0.72	\$ 0.74	\$ 0.77	\$ -	\$ 2.23
Maintenance Facilities	Lehman Facility Lot Resurfacing	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 0.07	\$ -	\$ -	\$ -	\$ 0.07
Maintenance Facilities	Mover Maintenance Facility - Lifts	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 0.10	\$ -	\$ -	\$ -	\$ 0.10
Maintenance Facilities	Bus Garages: Coral Way and Central	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1.73	\$ 1.73
Maintenance Facilities	Mover Maintenance Facility General Refurbishment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 0.82	\$ -	\$ 0.82

**Table 9-12: Proposed Infrastructure Renewal Program Needs (2019) (continued)**

Classification	Project Name	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total Estimated Cost YOE
<b>SAFETY &amp; SECURITY</b>												
Safety & Security	Lehman Facility - Fire Systems	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1.57	\$ -	\$ -	\$ -	\$ 1.57
Safety & Security	Metrorail: Fire Systems	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1.16	\$ -	\$ -	\$ -	\$ 1.16
Safety & Security	Parking Garages - Fire Suppression	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 0.95	\$ -	\$ -	\$ -	\$ 0.95
Safety & Security	Mover Maintenance Facility - Fire Systems	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 0.29	\$ -	\$ -	\$ -	\$ 0.29
Safety & Security	Existing Metrorail Stations Repair to Stair Railing (Part 2)	\$ -	\$ 0.20	\$ 0.17	\$ 0.41	\$ 0.12	\$ 0.30	\$ -	\$ -	\$ -	\$ -	\$ 1.20
Safety & Security	Pedestrian Safety Improvements at Coconut Grove Metrorail Station	\$ 0.25	\$ 0.96	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1.21
Safety & Security	Rail Fire Alarm and Halon Replacement Project	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2.12	\$ -	\$ -	\$ -	\$ 2.12
Safety & Security	SMI and OKE Garages Fire Alarm Replacement Project	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 0.41	\$ -	\$ -	\$ -	\$ 0.41
Safety & Security	Mover Fire Alarm and Halon Replacement Project	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2.39	\$ -	\$ -	\$ -	\$ 2.39
Safety & Security	SPCC Fire Alarm and Halon Replacement Project	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2.60	\$ -	\$ -	\$ -	\$ 2.60
Safety & Security	Safety Walkway Sections for the Metromover Test Track	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 0.37	\$ -	\$ -	\$ -	\$ 0.37
Safety & Security	Bus Garages: Fire Suppression	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 0.84	\$ -	\$ 0.84
Safety & Security	Emergency Plumbing Fixtures	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 0.23	\$ -	\$ -	\$ -	\$ 0.23
Safety & Security	William Lehman Site Lighting	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 0.50	\$ -	\$ -	\$ -	\$ 0.50
Safety & Security	Metromover Bridge Navigational Lights	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 0.04	\$ -	\$ -	\$ -	\$ 0.04
Safety & Security	Metromover Public Address System Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3.11	\$ 3.11
Safety & Security	Rail Public Address System Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2.81	\$ 2.81
Safety & Security	Rebuild MLK Park-and-Ride Garage	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 0.42	\$ -	\$ -	\$ -	\$ 0.42

**Table 9-12: Proposed Infrastructure Renewal Program Needs (2019) (continued)**

Classification	Project Name	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total Estimated Cost YOE
<b>TRACK &amp; GUIDEWAY</b>												
Track & Guideway	Replacement Work Vehicles 10-15 Year Plan	\$ 0.60		\$ 0.81	\$ 0.39	\$ 0.36	\$ 0.41	\$ 0.31	\$ 0.20	\$ 0.20	\$ 0.19	\$ 3.47
Track & Guideway	Fastener Replacement Station Areas	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1.07	\$ 1.05	\$ 1.02	\$ 1.03	\$ 1.10	\$ 5.26
Track & Guideway	Transition Area Frogs Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Track & Guideway	Metromover Brickell Extension Guideway Painting	\$ -	\$ -	\$ -	\$ 5.17	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5.17
Track & Guideway	Metromover Inner Loop Guideway Painting	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 9.53	\$ -	\$ -	\$ -	\$ -	\$ 9.53
Track & Guideway	Metromover Omni Extension Guideway Painting	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 7.26	\$ -	\$ -	\$ -	\$ 7.26
Track & Guideway	Metrorail Steel Box Girder Guideway Painting	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5.22	\$ 7.83	\$ -	\$ -	\$ 13.05
Operating	Parts	\$ (7.00)	\$ (7.00)	\$ (7.00)	\$ (7.00)	\$ (7.00)	\$ (7.00)	\$ (7.00)	\$ (7.00)	\$ (7.00)	\$ (7.00)	\$ (70.00)
	<b>TOTALS:</b>	\$ 10.11	\$ 12.32	\$ 9.70	\$ 12.43	\$ 3.79	\$ 38.30	\$ 92.68	\$ 68.82	\$ 42.15	\$ 46.23	\$ 336.54